BEYOND HUMAN CAPABILITIES

Viktor Mikhailovich Kandyba

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BOOKS

In his new book, based on material from Hitler's secret archives, the author discusses psychological techniques for developing superhuman abilities within oneself.

The book is aimed at a wide readership and may be of use to professional bodyguards and security guards, as well as to soldiers and officers in active service.

- Human Superpowers
  - THE MAIN SECRET OF THE THIRD REICH
  - THE BASICS OF PSYCHOPHYSICAL SELF-REGULATION
  - THE MYSTERY OF THE TWINS
  - A LECTURE BY V.M. KANDYBA ON SK AND HYPNOSIS
  - LETHARGIC SLEEP (APPARENT DEATH)
  - SOMNAMBULISM (SLEEPWALKING)
  - ON CRIMINAL SUGGESTION
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Beyond Human Capabilities by Viktor Mikhailovich Kandyba

THE GREATEST SECRET OF THE THIRD REICH

In the 1940s, Germany was the world's leading scientific centre for research into the latent potential of the human psyche and physiology. Germany was home to the world's only Institute of Psychology, and it was in Berlin that the great psychiatrist and hypnologist Johann Schultz worked – the author of a new European concept of mental self-regulation, which incorporated the very best of Eastern and global knowledge, and by 1932, Schulz's discovery had been fully developed into a fundamentally new form of autotraining, aimed at unlocking and utilising the reserves of the human organism. Schulz incorporated into his system the discovery by the French researcher Coué regarding the unusual effect of repeatedly uttered words.

The discovery by the American researcher Jacobson concerning specific psychophysiological effects achieved through maximum psychomuscular relaxation, and the key achievement of the East – the Indian, Tibetan and Chinese teachings on unusual physical and mental phenomena that can be attained through specially altered states of consciousness. I. Schultz called his discovery 'autogenic training' or 'a new system of autohypnosis'.

At the same time as Schulz's discovery, occult and mystical research had long been underway in Germany, based on Nietzsche's brilliant idea of the 'superman'. And since Hitler himself was the greatest mystic of his time and an official member of several secret occult organisations, upon coming to power in 1934 he immediately issued a secret order to establish fifty research institutes in Germany dedicated to studying the theory and practice of activating and utilising the hidden potential of human beings.

In the 1940s, top-secret psychophysiological research on an unprecedented scale was launched in Germany, drawing on the very best expertise available from India, Tibet, China, Europe, Africa, the USSR and America. In short,

, the stated aim of the research was to create a telepathic weapon or, as we would say today, a ‘psychotronic weapon’.

Of particular value to modern parapsychological science are the secret German experiments that were carried out on concentration camp prisoners. Under international conventions, such cruel and inhumane research on living human beings is defined as a crime against humanity; consequently, neither before nor after the war have scientists been permitted to carry out such experiments on living people. Therefore, all German research materials are unique and of inestimable value to parapsychology.

After the war, all of Germany’s secret research fell into the hands of the victors – rocket and engineering research went to the USA, whilst psychophysiological research went to the USSR.

In 1992, I began an active search for secret German archives. In the autumn of 1992, by special permission from the Vice-President of Russia, I was granted access to German documents which had been stored, completely untouched, in the Central Archive of the Russian Federation’s Navy, in the section containing secret documents relating to Admiral Canaris.

Following the expiry of the 50-year statute of limitations, I have been granted permission—for the first time anywhere in the world—to publish, in part, Soviet review materials on secret German research.

I shall begin by briefly outlining my popular science review of German research, focusing on the theoretical studies carried out by the Nazis, and then describe some previously secret practical developments—now available in the open press—concerning the control of human consciousness, physiology and behaviour.

The soldier of the future is a superhuman!

Every ordinary soldier can and must, in theory and in practice, become a superhuman, capable of maintaining self-control in any situation, including extreme ones, and of performing psychological and physical feats that exceed the capabilities of an ordinary person by several orders of magnitude.

Man is Spirit! And a superhuman is, first and foremost, a state of the Spirit! Therefore, in order for an ordinary person to become a superhuman, they must first and foremost remove the psychological barriers that are hard-wired into each of us through heredity and unconsciously, as well as those we have acquired, consciously or unconsciously, through life experience – such as, for example, a reaction to fire.

So, our reactions can be unconditioned (innate) or conditioned (i.e. acquired). Conditioned reactions have reduced the natural capabilities of every organism by a factor of two or three, or even more, whilst preserving and conserving enormous hidden reserves solely for specific extreme life situations, when demanded by extraordinary circumstances that are life-threatening. Therefore, to become a superhuman, there is no need to acquire anything new; we simply need to learn one very small thing – the ability to voluntarily activate our own innate capabilities, which we already possess but are only able to manifest in extreme biological situations! Our task is to learn to tap into these reserves at any moment when we need to! So, each of us possesses enormous natural reserves, and our task is to learn to use them whenever we wish!

The superhuman has no psychological, moral, social, physical or any other idiotic problems, whether invented by themselves or by similarly insecure subhumans!

The superhuman must know that life is but a moment stretched out over years, a moment that is utterly empty, and that this moment must not be filled with any social or moral rubbish. One must realise that no human being can gain anything without losing something in return; therefore, in order to acquire the abilities of a superhuman, we renounce all that is superfluous, invented by shepherds for their sheep.

Every human society consists of ‘shepherds’ and ‘sheep’ – such is the physical nature of people, and there is nothing to be done about it. So, all laws were devised by the ‘shepherds’ and were devised exclusively for the ‘sheep’! For the ‘shepherds’, there are no laws and there cannot be any – neither legal, nor moral, nor any other sort! No, because they devised these laws in the form of subjective prohibitions and

restrictions, and they themselves devised them exclusively for ‘sheep’. In Nature, there is only one objective Law – and that is expediency for survival! The struggle for life! And there is nothing else in Nature!

There is no Good or Evil in the world – these are artificial categories invented by weak people! Anything that seems like Good to you may be perceived by another person as a great Evil, and vice versa – anything that seems like Evil to someone may in fact turn out to be true, objective Good. Therefore, the superman must know that everything he does is Truth and Life! The superman is the highest of all truths! The superman is always right!

You must always and everywhere, in any situation, believe in yourself and always know with firm and absolute certainty that, at the very core of things, you are always right, absolutely always right! And everything else has been concocted by cowardly ‘sheep’ for the sake of self-justification and self-deception…

If an ordinary soldier believes unshakably that he is a superman, then this inevitably becomes the truth, for the key technique – the acquisition of superhuman abilities – is Absolute Faith! Faith in oneself and in no one else! Want to become a superhuman? Become one! After all, you can do it, and no one is stopping you except yourself and your rotten ‘sheep-like’ thoughts and prohibitions. A person is their thoughts! Want to change yourself? Change your thoughts, cast aside all barriers, and you’ll instantly become a superhuman! The solution to all problems that appear to be external actually lies within the individual! Within! So, change your inner state and you will change; you will cease to be an insecure ‘sheep’; you will become a superhuman – a great and invincible warrior of the new Aryan Empire! Attain a new, active state of Spirit, and our Army will become invincible, whilst you will become the ruler of the world, for from now on all your enemies are not human beings, but mere biological objects! The Empire must survive! And there are no other laws for us now, nor can there ever be! The Sacred Land of our Ancestors is in danger! And we shall mobilise all our hidden natural reserves and put them at the service of the Great Empire! There is nothing higher than the Empire, and this is the primary and true law of survival! It is either us or these subhumans, these biological objects, who

have treacherously taken everything from us and feed on the blood and sweat of our people! It is either us or them; there is no third option, and to each his own!

You cannot learn to become a superhuman from books, but there are still certain theoretical principles you must know:

1) A soldier's greatest strength lies in his mental state, not in his weapons, equipment or anything else!

2) All people must be regarded solely as biological entities, and one must always and everywhere consider oneself alone to be the one and only! The superman!

3) Man is Spirit; therefore, one must regard every endeavour solely as the self-realisation of the Spirit, and everything else is an illusion!

4) So-called 'physical reality' does not exist! There is only our Spirit, and life is merely a means of existence and realisation for our Spirit! We thank Nature for every obstacle or problem, for to us these are merely the best of all means for strengthening our Spirit and attaining Truth and Immortality! The Empire is our sole Truth and our true, genuine Immortality!

5) We must rid ourselves once and for all of the opinions held by the cowardly and vile 'bio-objects' around us regarding ourselves, our actions and our deeds!

6) Those who are absolutely certain never have to prove anything to anyone! That is why the superhuman never enters into an argument and never proves anything to anyone!

7) It is not the actual deed itself that matters, but only your attitude towards it! Your attitude towards anything – that is all that exists for you, not your own deeds and actions or those of others! You must live only by abiding constantly in the Spirit! There is only your 'Super-I' and nothing else! Everything is subject only to your Will, and it alone decides everything; it does not matter whether it does so consciously or, more often than not, unconsciously, automatically and spontaneously!

8) All work must be carried out dispassionately! Any emotional turmoil is unacceptable for a superhuman and is detrimental to the Will and the Spirit!

9) The superhuman never worries about whether there will be a result or not; we are not concerned with the result, as what matters to us are only our thoughts and the spiritual process of thinking itself, not any specific

physical outcome! We live solely in the Spirit! Complete indifference to the fruits of our labour and the outcome!

10) Our body is merely an instrument and tool of the Spirit; therefore, we are always neutral towards any process of doing anything, and neutral towards the techniques or technologies of any kind involved in our activities!

11) The Superhuman approaches everything—every practical matter—solely as an abstract Idea, and only critically, only rationally, and only on the basis of the interests of his 'Super-Self'!

The Hymn of Bodhidharma:

The fair-haired Aryan sage and warrior, who was given the historical name 'Bodhidharma'—which translates as 'The Way of Reason', came from the West to China and became the abbot of the Shaolin Monastery, where, for the first time in world history, he began to preach the doctrine of the superman as a supreme spiritual being, mighty and boundless in his achievements.

Bodhidharma was the first to develop the theory and practice of attaining the Absolute (or Great) Limit of human psychophysical abilities. We are interested in the text of Bodhidharma's Hymn, in which he encapsulated all the wisdom of the East and required all his disciples to learn the Hymn and recite it to themselves many times a day. Below is the text of this ingenious method of mental attunement and self-preparation, accompanied by our comments:

'I have a homeland – Earth and Heaven have become my homeland!

(This is a psychotechnical means of connecting a person to their true self, signifying that one must always rely solely on oneself).

I have a weapon! An unshakeable Spirit is my fortress and my only weapon!

(This is a form of self-programming for the unshakeability and strength of one's Spirit).

I have a stronghold! A focused super-will – that is my stronghold and my main weapon!

(You must make up your mind once and for all. Making up your mind – that is the main fortress which will automatically protect us. The main defence of a determined person is a new mindset, the mindset that from now on you are a superhuman! Determination gives rise to super-will, which automatically and unconsciously activates the body's reserve forces, and the person is transformed into a superhuman!

I have a Teaching! My life is my Teaching!

(This is a mindset aimed at removing internal and external, theoretical and any other limitations and constraints.

Here, the thought is self-programmed that the ultimate Truth is the life of one's own Spirit, and that nothing else exists that is more true or valuable.)

I have a Law! Justice is my Law!

(This is a mindset that, having become strong, there is no longer any need to be foolishly aggressive. The truly strong are not aggressive!)

I have a Teacher! My life is my only Teacher!

(This is a mindset of not revering anyone or anything other than the life of one's own Spirit, which learns only from the Tao – that divine Flow of life in which we all dwell).

I have a Master! My 'super-Self' is my Master!

(This is a mindset that affirms the authority of one's inner 'Self', one's absolutely free and all-powerful Will; a mindset that rejects the subjugation of one's Spirit to any person or to any circumstances or situations).

I have Magic! Inner Strength is my main and only secret, giving me the power of an almighty magician!

(This is a mindset focused on the unconscious and constant growth within oneself of a special Inner Strength, which automatically transforms us into superhumans in any situation).

I attain great inner values only by casting aside all external ones! I turn away from everything and am reborn for my own Spirit! I am reborn as another! I am reborn all-powerful and omnipotent!"

Such is the text of the Hymn of the immortal Bodhidharma, which he bequeathed to us – his descendants – through the centuries and the darkness of the Middle Ages!

The technique of self-coding:

To increase the effectiveness of self-commands, one must first master a special state of consciousness known as 'SK'.

In principle, a person cannot focus their attention and perform two tasks well at the same time. Human nature is such that a person performs well only at that which commands the most sustained and profound concentration of their entire active field of external and

internal attention is directed with the utmost stability and depth. Therefore, one of the secrets to success in any human activity, proven over the centuries, is to narrow the focus of the active field of external attention, shift it from an external to an internal orientation, and then achieve maximum, emotionless concentration of that internal attention on a specific external activity, which in this case will be carried out more than half automatically, with little conscious awareness, almost intuitively and to a high standard, through the mobilisation of the hidden, unconscious mental and physiological reserves of the human brain and the entire organism as a whole.

Thus, the main secret of psychophysiological phenomenology lies in mastering the state of Emptiness, that is, a state of thoughtlessness. To master the SK, one must eliminate superfluous thoughts by adopting a neutral attitude towards one's stream of consciousness until it calms down and comes to a halt of its own accord; only then will a 'zero neutral state' arise, much like a car's gearbox, from which the brain can easily be switched to any operating mode known to it.

It is important to remember that, in order to dramatically increase the variability and quality of the mind's functioning in the zero mode and to bring about the SK, there must be no internal barriers, and not only conscious ones, but also unconscious ones, since their presence will severely limit the ways in which the psyche can function, reducing them solely to standards and templates that are socially acceptable for that particular psyche—from which the psyche itself will be unable to break free—and therefore such a psyche is incapable of genius, non-conformity or miracles. Consequently, a key secret to improving the quality of the reserve or zero mode of psychophysiological functioning is a sincere, genuine and profound desire to be a superhuman and to be free of any internal 'complexes' – inhibitions and barriers – whether moral, social or otherwise. A deep, sincere desire will penetrate deep into the unconscious brain structures and processes and remove the invisible physiological barriers there, which, although unconscious, greatly hinder the full manifestation of the miraculous potential of a given person's zero mode of psychophysiological functioning. Thus, genuine sincerity and unwavering

inner resolve are the principal psychotechnical and physiological prerequisites for the state of the superhuman.

The Great Void is the invisible, primordial interstellar state of matter; it is Reality without form, in that primal state where it possesses neither time nor space, yet always contains within itself—in the form of electromagnetic radiation and images—the entire physical Reality of the past, present and future. Based on this strictly scientific physical picture of the World, as established by scientists, the superhuman must learn to work with the Void around them and with the Void, as the Great Principle, within themselves!

To master the state of Void, it is necessary to perform the following training exercises:

Exercise 1:

Place a sheet of white paper with a black dot drawn on it (a circle 3–4 cm in diameter) on a wall 3–4 metres away from you. Stand upright and, for 15 minutes, without blinking, fix

your gaze and attention (!) on this dot. The aim is to develop the unblinking gaze of a superhuman, as well as to learn to keep your attention solely on the dot and think of nothing else for the entire fifteen minutes!

Carry out the exercise until you develop the ability to maintain a stable state of thoughtlessness for the full 15 minutes; during this time, your gaze must remain unblinking for the entire 15 minutes, any sense of the body must be absent, and only pure Will remains, fixed upon the dot and unclouded by anything extraneous. The Superhuman is the eyes and Mind of the Universal Void itself, and this is his main distinguishing feature, yet at the same time a great and special responsibility, equating his own Spiritual nature with the physical nature of God Himself!

Exercise 2:

Only once you have mastered the skills of the first exercise should you proceed to the second! To do this, whilst continuing with the first exercise, you must achieve a panoramic effect; that is, whilst continuing to gaze at the point, you must, without moving your pupils, defocus your gaze and begin to see everything that lies before your eyes, whilst keeping your eyes motionless!

Whilst performing the second exercise, you must ensure that your mind remains completely empty; there must be no thoughts whatsoever! No body! No thoughts! Nothing at all, except a wide, defocused visual panorama!

Exercise 3:

Once you have mastered the second exercise, you should move on to the third. To do this, you need to master the technique of a penetrating, unfocused gaze; that is, you must learn to gaze with a defocused gaze not at a point, but beyond the point – into the space that lies far beyond the point; to look, as it were, through the point straight into the Great Void until a real physical sensation of external Reality arises across the entire skin of your shoulders, chest and back, arms and legs!

Exercise 4:

Once you have mastered the third exercise, you move on to the fourth, which involves developing a penetrating, unfocused gaze directed straight into Nothingness, straight into the Great Void, straight into external Reality itself, without any reference to a focal point. Mastering this exercise immediately provides both a purely psychological and, at the same time, a direct, tangible physical sensation of the subtlest Reality with every cell of the body, simultaneously all the way round, along the entire perimeter of the body — that is, from the front, the back, the sides — from all sides and all at once! The aim of this exercise is to release the attachment to any point outside or inside the body and to sense at least a few metres of the entire ‘cohesive Reality’ which, like a ‘cocoon’, surrounds the body on all sides! Consciousness, spread out along the perimeter directly into Reality itself, is the sought-after SK, i.e. the state of thoughtless, direct physical sensation of the entire surrounding Reality as one with the body, as an extension of one’s own body in all directions; and this unity and extension we must physically! truly! feel! Remember this state! This is the famous SK!

Exercise 5:

In modern science, this special psychophysiological state—which the entire global scientific community has spent many years trying to achieve—is called SK-1.

Let’s practise the skill of rapidly entering SK-1 using the code:

A) Stand with your feet together, arms by your sides; fix your gaze unblinkingly on the Great Void for 5–7 seconds, mentally commanding yourself to say ‘7’,

close your eyes and find yourself in SK-1! You are thrown backwards, then slightly forwards, and begin to sway! Using the power of SK-will, we force our arms to 'float' out to the sides and forwards, without saying a word! Mental command 'Z' – open your eyes, exit SK and shake yourself, aiming for a sensation of cold throughout your whole body. Smile! Lightness throughout your whole body! We sit on a chair, torso straight, hands on our knees. The mental command '7!' and we enter the SK; the command – and our hands begin to rise towards our chest and chin. The command 'Z!', we exit the SK and shake ourselves.

With an instantaneous effort of will, enter SK-1 and achieve a physical extension of your body throughout the entire surrounding Reality. To actually, physically(!) begin to perceive everything around you as yourself! Then, with a fresh effort of will, to increase the radius of your cocoon and your ability to perceive by a few more metres, thereby achieving a body that is one with Reality, with a radius of up to 10 metres or more.

Exercise 6:

The sixth exercise should only be performed after mastering the previous five. The aim of the sixth exercise is to master the art of moving within SK-1, whilst constantly remaining in and physically sensing unity with Reality.

A. Stand upright, toes together, arms at your sides. Enter SK-1 and cause both arms to 'float' outwards and upwards. The arms float automatically; we think, as it were, directly through the muscles, without words and without thoughts! This automatic, weightless movement itself is our thought! (a) Thought-movement! Let's make the movement more complex – the arms move towards each other (b), then move apart (c), then follow any complex, smooth trajectories (d), whilst the arms constantly sense the surrounding magnetic ocean – physical Reality!

B. Sit on a chair, enter SK-1, achieve a smooth, slow raising of the arms to a position in front of the chest (a), smoothly spread the arms apart (b), smoothly bring them together (c), and begin to make any more complex but smooth movements, without losing the sense of Reality, particularly with the hands (d).

C. Put on some pleasant, soft music, enter SK-1 and dance, performing any spontaneous, jerky dance moves or whatever movements you like, whilst maintaining and even developing the quality of SK-1 to such an extent that external Reality

is filled with our inner ‘Self’, and nothing but an extraordinary, expanded ‘Self’ exists any longer. Reality ceases to be perceived through the skin and begins to be perceived directly by the brain, bypassing the sensory system; that is, the feelings and sensations with which our unconscious operates also disappear, and all of Reality is transformed into our own

‘self’. A deeper SK emerges, which scientists have termed SK-2. This is the so-called ‘phenomenon of spontaneous intuitive knowledge’.

So, let’s summarise. For a soldier to master CK-I, the instructor usually spends between 20 and 30 minutes working through all six exercises together. No set time is specified for mastering SK-2; it is not always possible to train every soldier in 20 minutes, so mastering SK-2 is not mandatory for the average soldier! However, for the special services, mastering CK-2 is mandatory. Therefore, a rapid psychotechnique for mastering CK-2 (Exercise 7) is provided specifically for the special services.

Exercise 7:

A) The exercise consists of looking at a dot on the wall and, through the power of one’s Will and the imagination that has begun to develop, causing the dot to stir, and then making it obey the Will and start moving in the direction the Will desires.

B) Whilst continuing to train SK-Will and SK-Imagination, one must make the dot on the wall trace specific shapes – a circle, a triangle, a square. One must then be able to make the dot trace the numbers – 1, 2, 3, 4, and so on.

C) The dot is replaced by a similar circle drawn on very thin paper and suspended on a thread by the wall. The task is to use the power of Will in SK-1 to make the paper circle start to move under the influence of the SK-gaze, and then begin to swing in the direction indicated by SK-Will.

A reminder: to enter SK-1, you simply need to visualise it, recalling all the stages as clearly as possible – defocusing your gaze, the sensation of Reality on your skin, dissociating your Will and ‘I’ from your physical body, and, finally, identifying your psyche and your ‘I’ with the entire surrounding Reality—that is, spreading, filling and permeating everything around you with your ‘I’.

D) The trainee enters SK-1 and, whilst looking at an object, imagines touching it with their fingertips, then with their palm, then with their shoulder, then with their stomach, then with their back, then with their thigh, then with their shin, then with their toes, then with their tongue, and finally with their forehead. The aim is to achieve such a sense of reality in one's tactile sensations at a distance that light objects begin to move.

D) You must learn to physically 'SK-touch' any object using only your eyes, achieving a real sensation of physical contact and, where possible, a real physical action.

E) Repeat the same process mentally, whilst in a deep SK-2 state and imagining yourself as a double who is touching something and actually moving it, then, for example, reads and memorises something on a specific page in a closed book lying on a table in another room, which the trainee has never seen. At this point, the seventh exercise (for the special services)

is considered to have been mastered.

So, the self-coding technique for soldiers is very simple and consists of two psychotechnical stages:

1) First, clearly formulate (in your mind) your mindset – your goal!

2) Enter SK-1 and carry out the task!

Training in the psychotechnical application of SK-1 is initially carried out using a simple exercise, which allows you to increase your own strength through SK-1, to see this for yourself and to convince those around you. SK-1 can be used for anything, but you must begin your practice with an exercise to increase strength:

Exercise 1:

Soldiers are divided into 'first numbers' and 'second numbers' and stand facing each other in pairs. The 'first numbers' greet the 'second numbers' with a short, firm handshake. Then the first numbers self-code to increase the strength of their handshake specifically, enter SK-1 and once again greet the second numbers with a quick and firm handshake. Both the first and second numbers are convinced that, whilst in SK-1, the strength of their handshake has increased. The second numbers then repeat this exercise.

Exercise 2:

Soldiers line up along a line drawn in chalk on the parade ground.

Each soldier then performs three standing long jumps on their own and records the best of the three results. Then, looking at their best result, they give themselves the order to exceed it as much as possible, and to this end, they enter SK-1 and perform three SK jumps in succession. Everyone can see for themselves that in SK-1, all three results were further than the best of the previous three.

Tips:

1) When entering the SK-1, aim to achieve, if not the sensation of complete weightlessness, then at least an extraordinary lightness of body, extraordinary explosive power and agility, as well as a psychological and mental high, euphoria, and a high level of readiness, focus and coordination.

2) You must have absolute confidence in achieving record-breaking SK results!

3) Analogue SK self-coding can be applied, which

which involves the soldier, whilst in SC-1, trying to recall as vividly as possible the state and sensations they experienced when they managed to perform a given task excellently; the soldier then tries to immerse themselves in that atmosphere, those sensations and those experiences, and to recreate them within themselves as vividly as possible. And then they must carry out that task!

The soldiers line up in ‘first-second’ formation, and then the first numbers stand opposite the second numbers, in pairs. The first numbers hold both arms out in front at chest level and tense them as much as possible, whilst the second numbers try to push their opponent’s resisting arms downwards by pressing their hands from top to bottom. After a 1–2-minute rest, the second numbers set the programme, enter SK-1 and, recalling their youth and strength, repeat

The task is to use downward pressure to lower the arms of the first participants. Both participants note the difference in sensation between the first and second attempts at carrying out the self-command and are convinced of the effectiveness of combining SC-1 with analogue self-coding. The participants then swap places and repeat the exercise twice more – once without SK and once with SK plus analogue self-coding. This exercise proves to all older soldiers that, in the years since their youth, nothing has actually changed within them; only their state of mind has changed!

So we must now realise that our strength and agility have always been with us, all these years; they have not gone anywhere or disappeared – it is simply that we did not know how to 'unlock' them, as our state of mind had changed and our bodies had been conserving them in reserve for emergencies! And now, with the help of SK-1, we can be just as strong and agile at any moment throughout our lives as we were in our youth! The main thing is to believe in yourself, set your intention, enter SK-1 and do whatever is necessary with absolute and unshakeable confidence! Our body is capable of anything, and our task is to learn how to unleash these latent powers within us at the moment we need them! We must learn to visualise what we want as vividly as possible and then, with the help of SK-1, turn it into a real physical reality! Our body is the scabbard for the blade of the Spirit; it is a tool strictly subordinate to our Mind! And now, after these exercises, having convinced ourselves that each of us is in fact capable of so much more at any moment, we no longer simply want to become superhuman and believe that it is possible; now we KNOW that each of us is a SUPERHUMAN – this is no longer Faith, but Knowledge!

You are a superhuman! You are a superhuman! All you need to do now is think it, and you will immediately feel a surge of strength, energy and a lift in your spirits! Now you Know that this is true! You are a superhuman!

From now on, nothing is impossible for your Spirit!

You are a superhuman! The Empire above all else!

Acceleration and deceleration of the psyche, emotional and volitional training:

Secret research has established that the control of a person is based on influencing the level of arousal of the nervous system.

Every person's nervous system has its own individual level of arousal, which is optimal for their body. However, if we consider the population as a whole, we can speak of a certain average normal level of arousal, relative to which some individuals have a lower level and others a higher one. In other words, people can be divided into those with a highly aroused nervous system (combat soldiers, security guards, air traffic controllers,

drivers, intelligence officers, etc.) and those with a sluggish, low level of nervous system arousal (accountants, civil servants, etc.). Todetermine level of nervous system in a particular person, the following test should be carried out. Sit the person on a chair and ask them to place their hands on their thighs, palms facing downwards. Then take their wrist, lift their arm 20–30 cm and let go. If the arm drops relaxed (1) and falls quickly downwards, then this person has a low level of nervous system arousal. Such people are usually calm in everyday life, relaxed; their backs are rounded, and they

seem to be dozing as they walk, and if they sit down, they slump and support their head with one or both hands. If, on the other hand, the arm does not fall of its own accord but is lowered slowly under the subject's full voluntary control, this indicates an elevated level of nervous system arousal. Such people have a light, upright gait, and when they sit down, their head and back form a single straight vertical line (2).

A good indicator of the level of arousal is a person's speech—its intonation, volume, pace, etc. One can immediately determine from speech whether a person is aroused or not. A person's facial expressions, breathing, pulse, movements, reactions, etc., also provide certain information about a state of calm or arousal.

German researchers have developed specialised preparations that can raise or lower the overall level of arousal in the nervous system, but every soldier – a superhuman(!) – must be able to voluntarily control the level of arousal in their own and others' nervous systems; this will enable them either to sustain the body's functioning at an elevated level at will, or to sharply reduce it at will when necessary.

To gain control over one's own level of arousal, two exercises must be performed using the emotional-volitional SK training method:

Exercise 1:

Whilst standing or sitting, enter SK-1 and, using the maximum effort of your will, arouse yourself; to do this, imagine yourself burning in a dry fire, visualising fire both outside and inside you! Induce a sensation of lightness throughout your body, a growing surge of strength and an uplifted

mood! Exit SK-1 and return to your normal starting state.

Exercise 2:

Enter SK-1 again whilst standing, sitting or lying down; relax, calm down, and evoke a sensation of pleasant drowsiness, a growing sense of heaviness and a gentle, relaxing, comforting warmth. Imagine yourself resting and gazing at the sky or the surface of a lake.

Performing both exercises reveals that some soldiers find it easier and more successful to self-stimulate, whilst others find it easier to self-inhibit, which indicates their current level of arousal. Those with a low baseline level of arousal find it easy to self-inhibit and difficult to become aroused, whilst those with a high baseline level of arousal find it easy to self-stimulate but more difficult to self-inhibit. These are the two main, extreme types of people, although there are many individuals with intermediate, typical characteristics of arousal levels.

Those who find they have a low level of arousal tend to demonstrate greater abilities in certain parapsychological phenomena, whilst those who are highly aroused excel in others; for example, telepathy is more successful for the former, whilst heterohypnosis is more successful for the latter, the more active group.

German scientists have established that people perform many active super-feats against a backdrop of a ‘psychic surge’, i.e. a sharp increase in their level of arousal. For example, after watching exciting spectacles, young people tend to go on a rampage, smashing and breaking things, whereas after a Bach concert, nobody breaks anything.

The key discovery made by the German scientists was the physiological principle governing the management of an individual or a group of people, which lies in the fact that one must first stimulate their psyche using SK psychotechnology, and then relax and slow them down. Even the ancient religious preachers knew or suspected this key secret; at the start of any sermon (John, Jesus and others) they would shout and threaten with God’s judgement and a terrible retribution for sins, and then suddenly, in a peaceful tone, speak of the paradise to come, a quiet, sweet and eternal rest and tranquillity.

The depth of the trance—and thus the capacity for superhuman phenomena—is significantly enhanced by the repeated cycle of ‘arousal and inhibition’; with each cycle, a person enters the trance deeper and deeper and becomes

more and more controllable. Many managers have empirically observed and applied this pattern: in the morning, they first shout at their subordinates, and then calmly and quietly issue their main instructions; these orders are more firmly fixed in the subordinates' minds and are carried out more effectively. This pattern was also recognised in the East. For example, many Japanese firms begin each working day with the entire workforce lining up together, singing the company anthem in unison with great enthusiasm and reciting various pledges; only then do the employees disperse

to their workstations, where they work calmly and to a high standard, whilst regarding their team as a single, close-knit family standing against the rest of the world!

So, the main levers for influencing any individual or group of people are the acceleration and deceleration of the psyche! When this technique is skilfully applied, most people enter a trance-like state and, interestingly, subsequently unconsciously strive to return to this state of trance, which is very pleasant for them.

Scientists note that the higher a person's mental organisation, the less they need to interact with others; therefore, a 'superhuman' soldier no longer needs to interact with ordinary people, whom they regard as mere biological objects and with whom, for the superhuman, there is no point in communicating, since any speech they hear constitutes psychoprogramming, and so the superhuman must learn to react less to the words of others, especially those of 'bio-objects'.

The superhuman must possess a flexible and adaptable psyche and strive not to disrupt their mental structure, remaining neutral at all times, without excessive reactions or overreactions, except in exceptional circumstances. The true mastery of the superhuman lies in the constant, absolute neutrality of the Spirit!

THE BASICS OF PSYCHOPHYSICAL SELF-REGULATION

Practice is of great importance when learning the art of mobilising one's inner reserves. It is difficult to sustain one's enthusiasm solely on the basis of a theoretical, speculative belief in something; therefore, it is not enough merely to believe – one must definitely do IT, and then, as one masters a new phenomenon or a new ability, the realisation dawns that IT has been mastered and that ONE can do IT.

You must constantly monitor the level of your reaction. There must be a reaction, but it must remain 'cool'.

A. Correct breathing technique:

Exercise 1:

A) Stand up straight or sit on a chair and place your hands on your chest; use your hands to ensure that your chest does not move, whilst breathing freely and naturally, but only using the lower and middle parts of your abdomen. Relax your waist, if necessary.

B) Repeat this exercise with your hands in their normal position.

C) Practise 'skin breathing' – 'inhale through the skin, exhale through the skin' – this is known as 'energetic' breathing.

Both types of breathing (abdominal and skin) improve the quality of SK-1; furthermore, this combined breathing (air and energy) significantly improves health and increases productivity.

When practising breathing exercises, especially at first, the lower body should be dressed in loose-fitting clothing, and during the session one should aim for this type of breathing (using the lower abdomen and the entire skin surface of the body) to become as natural and automatic as possible.

It is easier for men to master correct breathing, whilst it is slightly more difficult for women; this is because most men breathe from the abdomen, whilst most women breathe from the chest.

Proper breathing is considered to have been mastered when it becomes your normal way of breathing – automatic and involuntary – that is, you are now breathing correctly all the time without even realising it; in other words, proper breathing becomes a constant habit.

B. Technique for controlling heart function:

When performing certain phenomena, a superhuman's heart rate must increase sharply, whilst for other phenomena it must decrease. In other words, in order to demonstrate SK phenomena, the superhuman must be able to control their heart rate at will—whether to speed it up or, conversely, slow it down—and be able to do so simply through an effort of will.

To gain control over one's heart rate, the following exercise should be performed:

Exercise 1.

A) Settle into a comfortable position, whether sitting, lying down or standing. Place your right hand on your heart, close your eyes, enter SK-1, heighten your overall sensitivity and become aware of your heartbeat. If you are unable to sense your heartbeat in this position, remove any distractions and repeat the exercise, placing your hand on your solar plexus or throat, near the carotid artery, to feel the pulsation more clearly.

B) Once you have sensed the pulse, begin to perform light, almost symbolic squeezes with your right hand in time with the pulse. Aim to merge the sense of rhythm with the squeezing of your hand.

C) Your hand is now in unison with the heart's rhythm; by altering the rhythm of your hand's squeezes, you can change the heart's rhythm – first practise accelerating the pulse, then slowing it down.

D) Return your hand to its normal position and master the training exercises for speeding up and slowing down your pulse through a purely mental act of will.

B. Mastering stretching exercises for martial arts:

Soldiers must know that any person's ligaments can be stretched to twice their normal length in a single training session without any harm to their health. The main secret is SK-1, the absence of fear and deep muscle relaxation. There are two types of SK – activating and relaxing – and in this case, PSK-1 (passive SK) is used, which the Germans called 'autohypnosis'.

Every soldier is capable of performing a front split straight away, and a side split within 2–3 training sessions. In a single training session, anyone can perform any complex Eastern 'asana', even one such as the 'Lotus'.

For the exercise to ‘work’, one must enter PSK-1 with the intention of relaxing and be absolutely certain that the result will be achieved and that everything will succeed right now, as all German psychotechnics ‘work’ regardless of whether you believe in them beforehand.

The key lies in the inner strength of the superhuman warrior, unshakeable self-confidence and the firm, unquestionable knowledge that you can do it!

The most crucial factor for success is a special inner readiness, which serves as a preliminary mindset for any superhuman behaviour and outcome. Outwardly, this inner readiness and strength manifest as unemotional confidence in one’s actions. You must always remember that any superhuman warrior can and must master this immediately; therefore, you too can and must do so straight away—that is, perform stretches of any complexity immediately.

When performing the exercise, the stretch should be carried out with smooth, frequent, rhythmic swaying movements, resembling a vibration whilst completely relaxed. If you feel any unpleasant pain, do not strain yourself! You may, after stopping the exercise, give a good massage to the areas where you feel discomfort; however, in the event of sharp pain, you should consider the session sufficient for the first attempt and, after a 5–10-minute rest, perform an exercise to mobilise the joints in a new position, and then repeat the stretching attempt. The main prerequisite and guarantee that nothing bad will happen is SK! For every training session, regardless of the exercise – not just stretching – you must never act hastily, carelessly, overconfidently or without SK preparation. If you have not yet achieved a high-quality SC, you must not attempt any feats, as in this case, instead of an excellent result, you will end up with an injury! Remember! SC is the only internal switch that puts you into superhuman mode, and without SC, you are just an ordinary person! Therefore, if, whilst preparing for any phenomenon, you feel that a high-quality SC state has not been achieved and there is no euphoria yet, but rather a sense of overconfidence, then you must not proceed with the phenomenon! Therefore, even if you have performed this phenomenon 1,000 times before, you must still approach your SC preparation and

high-quality trance support every single time as you would the first time – with care, seriousness and responsibility – otherwise you risk injury!

D. Techniques for regulating metabolism (regulating weight, height, toxins, radiation, etc.):

Exercise 1:

The aim of the exercise is to subject the body to volitional processes. Stand up straight and clench your left hand firmly into a fist in front of your chest. Raise your right hand and place it on top – in a push-up position (see fig.) – and, with maximum mutual tension in both hands and the entire shoulder girdle, hold the push-up position for 1–2 minutes. Simultaneously with the physical stimulation of the entire nervous system, command yourself firmly three times: 'My Spirit is stronger than my body!' At the same time, you should tense your abdominal muscles as much as possible. This should be followed by a self-command with a specific programme of intent, for example: 'The toxin is being expelled from the body without harm! There are no reactions! There is nothing! The toxin is completely expelled and removed immediately and forever!"

When giving self-commands to alter metabolism, your SK-will and attention must be focused on the warmed diaphragm. German scientists have established that controlling the diaphragm raises body temperature and accelerates metabolism, expels poisons and toxins from the body, promotes instant healing, and acts as a triggering physiological mechanism in resuscitation situations. In other words, by controlling the diaphragm, one can use the Will to maintain a state of life despite, for example, a fatal wound. The skill of working with the diaphragm is one of the great secrets of German researchers into the creation of the superhuman. Furthermore, in the event of poisoning or simply a malfunction of any internal organ, one must concentrate one's Will, set a programme, and, by accelerating the mind, 'warm up' precisely that specific organ or group of organs, whilst being absolutely certain of the desired outcome!

In particularly difficult situations, these self-commands should be repeated mentally, in a whisper or aloud at least 10 times; in even more difficult situations, they should be repeated aloud whenever possible and without interruption until the situation is no longer critical! The main thing to realise is that anyone, even an ordinary person, can save their own life in any situation, however dire, through their iron will to live. A well-known

for example, a case where a Russian soldier in a German concentration camp, whilst undergoing an ‘experiment’, kept his head alive for five days after it had been severed, whilst all the while his body, kept at a distance of 15 metres from his head, continued to live. The Russian soldier’s body continued to live and carry out the head’s commands, even after the removal of his heart, then his liver and kidneys, followed by the forced cessation of breathing; it was only after a blow had shattered the brain within the head that physical death set in. I do not wish to describe the Nazis’ ‘experiments’ in the concentration camps, but I can say only this: the human Will can conquer anything! And it is practically impossible to kill a person of Will, as they can safely withstand any injury—whether from electric current, fire, poison, penetrating wounds, etc.—for superhuman Will is the greatest Force in nature. It is a Force equal to the Power of God! And it is capable of any miracle that our consciousness can conceive. If one desires it strongly enough, then through a superhuman exertion of Will, one can destroy any physical object at any (!) distance, even in space, or, conversely, sustain its existence, come what may!

For example, it is well known that a mother’s strong love saved the lives of thousands of young soldiers at war, even in situations where everyone else perished, yet this one soldier still survived; indeed, he knew and was certain that he would survive, and his mother knew and sensed all the situations that posed a danger to his life, and at those moments she was particularly ‘worried’, yet firmly ‘wanted’ and knew that her son would survive! And her son did indeed survive the most perilous situations.

History records numerous instances and testimonies of highly determined commanders, absolutely certain of their invulnerability in war, who would stand up to their full height and march under heavy fire, yet the bullets would not hit them! Moreover, these were not one-off incidents, but happened several times a day and over the course of several years; such people were said to be ‘protected by a spell’, and everyone knew – and no one doubted – that bullets and shells were powerless against that particular commander. Willpower is a god on earth! Exercise your willpower, and you can become a superhuman!

And now let’s move on to the second exercise for working on metabolism and other bodily functions:

Exercise 2:

Standing or sitting, enter SK-1 and, placing your dominant hand (left or right) on top of one shoulder, induce a sensation of warmth and other specific individual sensations within the shoulder. Then, in sequence, focus your attention and ‘warm up’ your heart, stomach, liver, kidneys, intestines and knees.

German research has established that, through an act of will, a superhuman can increase the intensity of the radiation from their hands hundreds of times over, particularly in the centre of the palms and at the fingertips. They termed this phenomenon ‘bioradiation’, whilst the effect itself ‘bioradiation effect’.

As a result of bio-radiation SK training, any soldier can quickly – in just 2–3 twenty-minute training sessions – learn to project bio-radiation over a distance of up to 20 metres, targeting any object. Some soldiers begin to generate such powerful radiation that it becomes visible as a laser beam capable of killing, burning and causing explosions. There have been several documented cases where soldiers were able to do this simply by gazing at a target, without pointing or even moving their hands at all.

This concludes the study of the fifth section (Fundamentals of Self-Regulation), and the trainees move on to studying and mastering other skills.

Falling Technique

German superhuman training programmes include the ability to fall on level ground, on stairs, etc.

The main secrets to the art of falling are: 1) a certain level of relaxation throughout the whole body; 2) the ability to tuck in and protect the head;
3) the ability to tilt the spine to one side; 4) the ability to tuck the body, i.e. to shape the body like a wheel; 5) converting the kinetic energy of the fall into the mechanical work of the body’s rotation by releasing muscle tension and rotating the body; 6) the ability to maintain, at the necessary moments and against a background of general relaxation and passive SK-1, a slight, technically controlled tension of active SK-1, in the right place and at the right moment; 7) the ability to distribute the energy of the initial impact across three successive points: the shin, the thigh and the pelvis; 8) a complete

absence of fear and automatic, intuitive control of the situation, with an appropriate, instantaneous, unconscious response to changes; 9) constant maintenance of high-quality SK-1 and SK-confidence that everything will be fine.

You must realise that you cannot split a down pillow with an axe; in other words, the soft always survives, whilst the hard perishes! That is why a relaxed, intoxicated person remains unharmed in all manner of falls. Hence, the self-command goes like this: 'The body is water! Completely relaxed and unharmed! The body is water!'

In any fall backwards or to the side, you must not put your arm out, so as not to sustain an injury! You must always protect your head – either with your arm or by dodging – and during falls, you must press your head against your chest and tilt it slightly to the side in preparation for a subsequent roll – a backward somersault and using the somersault to dampen the momentum of the fall. In combat situations, a back somersault is performed with a return to a standing position in the basic or starting combat stance.

You must always remember that a relaxed body does not sustain injury, and you must not change your facial expressions or breathing! Under no circumstances should you tense up whilst falling, or attempt to sit down or put out your arm whilst falling backwards! A fall in any direction must be made only onto your side, to prevent accidental injury to the spine, which is the most vital organ after the head.

The superhuman's instinct for self-preservation and that in games are two completely different things! In SK-1, the instinct for self-preservation will automatically protect the head and spine during complex falls, whereas fear, on the contrary, will lead to injury. The aim of fall training is not so much to learn how to fall, but rather to develop a 'sixth sense' – intuition and intuitive, instantaneous, unconscious reactions that are appropriate and adequate to a rapidly changing situation.

So, practising falls is essential! This is so that you not only believe, but know, that your body and your intuition will not let you down at the crucial moment – especially as you already have practical experience of mastering complex manoeuvres. You should practise falling initially on level ground from a standing position, alternately in all directions. Next, do the same following a gentle shove, and then a strong shove in any direction. Then make the terrain of the landing area more challenging, starting with an upward slope, and then

practise on a downward slope. Next, practise on a wide wooden staircase, then on fire and glass, then on solid surfaces, and then from varying heights. Then practise whilst moving from slow-moving vehicles, and then from fast-moving ones and at high speed! Remember, we don't need falls; we're only training the Spirit! And all we'll be doing is training the Spirit!

Techniques and methods of mental programming

Whether we like it or not, any human-to-human contact is a form of mutual psychological programming! The nature of the human brain is such that people perceive – consciously or, for the most part, unconsciously – directly into their own minds absolutely everything they see, hear, feel and experience: all information, without exception, about what is happening around them. 99 per cent of incoming information remains in the deep structures of the brain, where all words, images, sensations, etc., are stored in the memory structures of the left and right hemispheres, whilst 1 per cent is immediately recognised by the person, who reacts to it straight away. The bulk of the information, however, is processed over a period ranging from a few minutes to a lifetime, and therefore does not make itself felt immediately, but only after some time has passed. And, surprisingly, the main verbal-informational and sensory-imagery content of our brain always manifests itself covertly and unconsciously.

In other words, when we say, perceive or do anything, we do not even realise that we are acting in this particular way rather than another because of 'decisions' that are made 'not by us', but by the deep structures of our own brain under the influence of the information, feelings and images stored in its memory. Moreover, the events that have led to our behaviour or reactions today may well have taken place many years ago, yet have only now 'surfaced' and had a strong 'impact', although they have been exerting a gradual influence all along. So, nothing passes without leaving a trace in a person; everything is recorded, and sooner or later—and sometimes constantly—it genuinely influences us, affecting everything we do, think and even dream about.

German researchers have established that, for information perceived by a person to take effect more quickly, the very process of perception must be structured in such a way that the critical-analytical mechanisms of the perceiving brain are switched off, allowing everything to pass into the brain smoothly and without delay. And the critical and analytical brain mechanisms that ‘interfere’ with perception are switched off only under two essential conditions: 1) when the recipient trusts the information completely, 100 per cent, and
‘opens up’; 2) when the incoming information comes from a source that the recipient regards as highly authoritative. These two conditions are the key to effectively influencing any individual or group of people!

So, the key to programming is to achieve authority and trust! Authority is, in fact, the mode of controlling a person (the rapport mode).

Based on this discovery by Hitler’s scientists, researchers have devised the most powerful and 100 per cent foolproof method of programming human behaviour and reactions, which involves the person seeking to influence and programme someone else to do something having to fulfil just two tasks:

1) To pose as another person – someone who commands ‘unwavering’ authority, or even more than that, specifically for this particular person or group of people. For example, suppose you need to stop a person driving past in their car and then do something to them. Think about how you could do this? It’s impossible, because in the blink of an eye they’ll have driven past you, and it’s impossible to reach them from a moving car. Yes, this is impossible for an ordinary person with
a ‘normal’ mind plagued by insecurities, but a superhuman would undoubtedly proceed as follows: they would disguise themselves as a traffic police officer with a submachine gun and, with a threatening gesture, demand that the car stop! And the car would stop, and the ‘driver’ would get out of it – indeed, they would get out of their own accord and approach you of their own accord.

2) The script for the conversation with the ‘bio-object’ should be that, right now, you give or offer them something that is genuinely very beneficial to them and exactly what they need; or, even better, if you structure the situation so that the ‘bio-object’ asks you for something themselves and you immediately grant their request, as it were. It is precisely this

your behaviour, and only this, is capable of inspiring trust in you in any person. So, you simply give, give and that's all. An example that illustrates this point well is the so-called
'healing sessions' offered by various fraudsters. To avoid being caught out and to gain people's trust, these con artists organise 'free healing sessions'. People go along to such
'free' session, but instead of free treatment, they're met with self-promotion and an offer to buy 'medicinal' herbs, a 'healing' talisman, a 'healing' icon or something else that will 'ward off the evil eye and curses, reunite broken families and bring back a husband, cure any illness, increase sexual potency, restore youth and prolong life, improve business prospects, etc.' Since a state of belief has already been established through the 'free' session, people believe in the healing power of the remedies offered by the fraudsters and buy them for large sums of money. In this way, fraudulent 'healers' extract from poor, gullible and sick people sums of money 10 to 15 times greater than if the sessions had been charged for. If the sessions were charged for, very few people would turn up; but if they resort to deception and advertise the sessions 'free', hundreds of duped people turn up, who are forced to buy 'healing photos' and 'healing talismans' and thereby hand over to the swindlers several times more money than the cost of a ticket if the 'session' had been charged for.

So, in this 'medical' example, the principle of establishing a state of belief is applied: the client isn't asked for anything, but is instead given something 'for free' just like that; and to emphasise this
'free' nature, the poster always states that the event is organised by sponsors, such as a charitable foundation, thereby reinforcing the idea that there is no profit involved; on the contrary, the 'kind sponsors' (who are in fact fraudsters) are providing people with a free service, as it were, out of purely 'charitable' motives. Well, as for the fact that, through such cunning
'charity' the fraudsters have made a fortune, people have no idea.

To better illustrate the mechanism of manipulating people, I'll give another 'medical' example. For instance, you're given the task of treating a person or a group of people, yet you're not a doctor and know nothing about diagnosis or medicine.

So how do you achieve the desired result in this case – curing a person? Bearing in mind the German theory outlined above, you must do two things: 1) establish yourself as an authority figure for that person or group of people; 2) build preliminary trust and belief. How do these fraudsters – these 'healers' – go about it? Firstly, it is common knowledge that God is the most authoritative figure of all. This means that fraudsters solve the first task by acting in the name of God. At the same time, the second psychological task is also solved – the creation of a state of faith, i.e. a state of rapport (a state of control), as it is difficult not to trust God, and the vast majority of people would never dare to do otherwise! With this in mind, fraudsters posing as 'healers' proceed as follows. Firstly, they pass themselves off as someone else – a person purportedly a 'hereditary religious healer' who allegedly 'heals through prayer and secret incantations passed down "from their grandmother"'. The fraudsters don various disguises, such as a 'traditional' headscarf, blouse, etc., and wear various crosses, icons, and so on. They claim that their 'healing' power was bestowed upon them not by just anyone, but by the Virgin Mary herself or the Lord God Himself, who appeared to them in a dream (or in real life) and commanded them to heal people: 'Go,' they say, 'and heal!' In this way, they claim to be carrying out God's will and acting in God's name.

Secondly, the fraudsters structure the healing process itself in a strictly defined manner, once again emphasising that everything is done not by them, but by God Himself! To this end, on stage or in the room where the 'healing' takes place, there is always an icon with lit candles in front of it, and sometimes there are many icons, a crucifix and so on on the walls. Prayers specifically mentioning God's Name are invariably recited, and the sign of the cross is constantly made in the air or in front of people's faces. The fraudsters hold a large cross in their hands, with which all the procedures are performed; moreover, to evoke the desired emotion, patients are required to kiss the cross, and so on.

If, however, the fraudster is not acting in the name of God but, for example, poses as a 'sorcerer', then the props, clothing, words and furnishings are all different, reflecting a 'new' theme – skulls, candles, crosses, dark clothing with a brooch on the chest, open pages of ancient tomes, symbols of the Devil, arcane symbols, stars, Tarot cards, hallucinogenic smoke rituals, speech laced with mysterious incantations and strange manipulations, and so on.

So, we can see that specialists in mind control find out in advance what a person needs or what they believe in, and use precisely this to programme them, but according to their own desired scenario.

To practise the art of transforming oneself into a specific persona and influencing people, you need to carry out the following training exercise:

Exercise 1:

Rent a room at your nearest Community Centre and commission the centre's artist to design a poster announcing that, on such-and-such a date, a free(!) healing and wellness session will be held by psychic Ivan Longo – the grandson of the famous Longo, whose secrets you have studied and will put to use during the upcoming session. Using the stage name 'Ivan Longo' (which anyone is free to do), on the day of the session you must go on stage and invite a particularly striking young woman or girl from the audience.

Seat her on a chair in front of the audience—your 'patients'—ask her to close her eyes and hold her palms out towards the audience, whilst you stand behind her, placing both hands on her head. Then, addressing the audience, you must say: 'I am now going to conduct a healing and wellness session using an ancient, secret imperial Chinese system, which was taught to me by my grandfather – Longo – who spent 20 years studying these systems in the mountain monasteries of China, Tibet and India. I shall channel a special energy into the young woman, which I have been concentrating within myself for a whole month using Chinese methods whilst preparing for this session. I shall focus on her sahasrara chakra, and my healing energy will be enriched by her youthful, beautiful energy and will begin to radiate out to all of you through her palms and fingers. Hold out your palms towards our energy, and you will all begin to feel the healing effect immediately or after a short while! Those of you who have already begun to feel the healing effect in your hands or even throughout your body, please raise one hand so that I can see it (many patients in the audience raise their hands). Right, good. Now that you've seen for yourselves that the healing session has begun, please close your eyes, lower both hands into a comfortable position, relax and rest, whilst my assistant and I treat you. And to lift your spirits, I'll put on some pleasant music (play the music).'

After 30–40 minutes, you say: “And now I’ll count to 5; you’ll open your eyes and feel rested, feeling well and in a good mood! I’ll count – 1, 2, 3, 4, 5! Please open your eyes! So, you’ve received a revitalising boost of youthful and healthy energy, and from this session onwards your health will begin to improve – and many of you are already feeling the benefits! Chinese emperors used to be treated using this method, and it helped them live to be over a hundred years old without ever falling ill! I hope this session will help all of you too, and that you’ll live long and happy lives! Our session is now over; thank you for coming to visit us. I wish you all the very best. Goodbye!”

After the session, you must carefully analyse everything that has happened. Your task is to ensure that the German psychotechnique has worked! You have posed as an authoritative psychic and bolstered belief in the ‘healing’ method by referring to the secret of the Chinese emperors’ rejuvenation. You’ve seen for yourself that it worked for everyone, absolutely everyone! The audience really did begin to feel the effects of the ‘young energy from the sahasrara chakra’ and really did start to be healed, with some miraculously recovering straight after the session. But you know full well that it’s all a hoax, that you’re no magician and that no ‘energy’ or ‘chakras’ exist, that you made it all up yourself; yet you constructed your deception according to the principles of neuro-linguistic programming, and you must now conclude for yourself that the scientists are right: the main thing is not what you do, but the belief in your authority on the part of the person you are influencing. That is why it is written in the Bible: ‘According to your faith, so shall it be unto you!’ So, the main thing is your authoritative behaviour and the state of faith in the person you are psychologically programming.

Turning to the medical aspect of psychoprogramming, it is worth noting that Hitler’s researchers established that ‘chakras’ do not exist, and that the diagram of ‘chakras’ and ‘meridians’ coincides remarkably with the modern diagram of the human nervous system, so credit must be given to the ancient Indians and Chinese, who, without yet knowing the anatomy and physiology of the human nervous system, nevertheless managed to surmise the existence of certain internal connections within the body.

So, people are programmed by faith (a state of belief), and the more authoritative the source of that programming, the greater the effect of the information being imparted

information is! Recently, a psychologist I know told me a story about how, by posing as a terrifying sorcerer and Satanist, he cured a severe alcoholic. The psychologist learnt that the patient strongly believed in Satan, the Evil of the World, devils and so on, and so he exploited this belief by transforming himself from a psychologist into a supposed sorcerer and Satanist. The psychologist put the patient into SK-1 and said:
'I am entering into a blood pact between you, myself as the intermediary, and Satan himself. If you break this pact and drink even a single drop of alcohol, your soul will immediately be sold to Satan and enter his service straight in Hell!' To reinforce his words, my acquaintance cut the alcoholic's finger and, taking his blood, used it to sign the prepared contract. The contract was then burnt and the ashes thrown out of the window.

Interestingly, many psychotherapists and even two celebrities had tried unsuccessfully to cure this alcoholic, but only my acquaintance was able to do so and achieve success, precisely because he utilised what the patient believed in.

Another acquaintance of mine, a practising psychologist, learnt from his client that the latter had once suffered severe pain in the heart region. He asked him whether he remembered the pain clearly, and when the client replied that he did, he asked him to recall the whole situation in detail—all the circumstances under which the pain had occurred—and to describe in more detail where and how it had hurt. Right in the middle of the client's recollection, my colleague suddenly interrupted him and, in a stern, commanding voice, ordered: 'You will do such-and-such today, otherwise these heart pains will return, and with even greater intensity! If you do not carry out my order, no one will be responsible for your life anymore!' And the psychologist slammed his fist down on the table. That very same day, the client carried out the psychologist's instructions to the letter, even though many people, including the client's own family members, had been unable to get him to do what was required.

This example shows that psychoprogramming works best against a background of nervous arousal or, conversely, nervous inhibition!

It should be noted that psychoprogramming techniques must be carried out with great confidence, in the SK-1 state—that is, with a blank, emotionless gaze, where any 'opponent' is merely a biological object to you, whilst you are a SUPERMAN! The detached expression of the superman automatically

instils a subconscious fear in everyone else. You must always act naturally and spontaneously, without overthinking or pondering!

There is another form of non-authoritarian psychological programming, but it is less effective, as it is not based on unconscious fear, but on other, less effective principles.

There is also a technique of psychological programming based solely on 'image'—that is, by pretending to be someone else; that's the whole trick.

Technique for handling sharp, pointed and cutting objects

German research has shown that, in every person's nature, at the root of many of their reactions—and even their behaviour as a whole—lies a genetic, unconscious instinct of fear. This inner fear has been inherited from animals, which is why modern humans are not even aware that fear underlies their actions. It is precisely this unconscious fear that causes the body to automatically mobilise and tense its muscles in threatening situations; in some people, however, the opposite occurs: it can completely paralyse their will and movements, leaving them frozen, unable to do anything or even move a muscle.

Sharp and cutting objects subconsciously trigger fear and an automatic tensing of the muscles, but the physical properties of such objects are such that they are particularly effective against hard surfaces – cutting and piercing them – whilst they do not cut or pierce soft ones. Therefore, the art of handling sharp, piercing and cutting objects (knives, glass, etc.) lies in not being afraid and, at the right moment, relaxing as much as possible through SK! At the same time, one must be absolutely certain that everything will be fine! The SK self-command formulas are as follows: 'I am a superhuman!

I am Spirit! And my body is an obedient and reliable instrument of my Spirit! Spirit decides everything; I know this and am absolutely confident in my Spirit! The point of contact is water – soft and relaxed, with skin as tough as iron armour!"

To get the hang of the ‘armour’ sensation, you must first induce this sensation on the skin between your thumb and index finger; then you must try to pierce this ‘hardened’ skin yourself with a needle, and you will find that it cannot be pierced – this is the ‘armour’!

SK-1 automatically causes the skin to ‘harden’ – not the muscles, but only the skin – so, for example, to walk on glass, you must command: ‘Feet, relax like water! The skin of the feet is numb armour!’ If contact with the glass is made with your back or stomach, then instead of the word ‘feet’ in the SK self-command formula, insert ‘back’ or the word ‘stomach’.

Exercise 1:

1) Use a hammer to smash 5–7 bottles on a tablecloth, breaking them into small pieces, then discard any large, uneven shards, particularly the bottle bottoms, necks and so on. Spread the broken glass evenly across the tablecloth over an area of approximately 50 cm × 50 cm. Remove or rearrange any pieces of glass that protrude significantly or stand out from the pile, adjusting them so that the surface of the glass is as flat and even as possible. These measures make the exercise completely safe, as it is simply impossible to cut yourself in this situation; the secret lies in the even distribution of the glass across the entire contact surface (feet, back or stomach), which distributes the body’s pressure across each of the hundreds of pieces of glass and makes the pressure so slight that it is impossible to cut yourself, provided the contact area (back or feet) of the SK is relaxed!

So, having prepared the working surface of the glass as described, you should scatter some small, sharp pebbles onto the sheet next to it. Then enter SK-1, give yourself the command to relax your feet in the SK state, and achieve a relaxed numbness in your feet by first standing on the sharp pebbles. Once you are sure that your body is ready and you feel nothing, carefully and gently step onto the glass and take a few steps on the spot.

2) Perform light jumps on the glass.

3) Perform a back somersault on the glass (your head must not touch the glass).

4) Lie on your back on the glass, whilst your partner drops a knife onto your stomach from a height of 0.5 m, then from 1 m, then 1.5 m, and finally 2 m!

Exercise 2:

1) You enter the SK-1 and SK-relax positions with your arms. Your partner delivers light strikes to your arms with the tip of the knife. For safety reasons, you must not make any slashing movements with the knife; instead, you must strike with the blade only perpendicular to the surface of the body to ensure that you avoid cutting the skin.

2) Perpendicular taps with the knife blade on the abdomen.

3) Light taps with a blunt plastic knife at any point on the body; whilst doing so, you must ensure that you are able, without the need for verbal self-instruction, to instantly relax the points of contact using SK, paying particular attention to the 'armour-like iron skin' phenomenon.

4) Develop a new technique for contact with a blunt plastic knife, which involves briefly jerking your whole body in the same direction as the strike, thereby neutralising its penetrating force.

5) With the instructor's guidance, practise the technique of completely evading strikes from any sharp object, using a plastic knife as an example. If you happen to miss a strike, you should not feel anything. This means that the SK reaction must be triggered on its own, spontaneously and automatically, based solely on intuition.

6) With the help of an instructor, you will learn techniques for evading strikes from sharp objects (such as a plastic knife) as well as techniques for delivering counter-strikes and taking action. The aim is to engage in combat with an armed opponent just as fearlessly and confidently as with an unarmed one, regarding them not as an 'armed opponent' but as a foolish 'biological object' who has dared to attack a superhuman!

Research by Hitler's scientists led to the conclusion that pain is a psychological phenomenon, not a physiological one, and that it is generated solely by fear and doubt! And if there is no fear or doubt, then there is no pain and there never can be! But still, the key at the point of contact is that instant SK relaxation! That is why everything is then practised for real.

Exercise 3:

All the tasks from the first exercise are carried out on real glass, removing only the bottoms and necks of the bottles, and all the tasks from the second exercise are carried out with a real stick or knife. This third exercise should only be practised by professional military

special forces and in a real combat situation involving 'biological targets' and their destruction.

The slight stress experienced during training is good exercise for the Spirit! And for the superhuman – whatever they do, it is merely 'training of the Spirit'! Therefore, after training, even in ordinary or highly complex real-life situations, you will find it easy and even slightly enjoyable, as after such training the superhuman feels an improvement in health, a surge of strength and an emotional lift!

For the superhuman, any real-life difficult situation is merely an exercise – a simple exercise in overcoming fear and cultivating an invincible and powerful spirit! This is the key psychological mindset: everything dangerous is merely an exercise for the Spirit! From now on, this mindset becomes your unconscious inner state, which in turn becomes the main physiological trigger for intuitive, instant and appropriate reactions to any unexpected and dangerous situations. Once I asked a famous Chinese master – an old man of 123 years – whether it was true that it was impossible to shoot him at point-blank range, not just with a pistol, but even with a cannon. The master replied, 'Yes, it's true; nothing can kill me, because where I am supposed to be killed, I simply won't be there, as I will sense it in advance and appear to my opponent in a completely different place and situation, and kill him.' This is the kind of intuition that is the very purpose of training for the superhuman. Intelligence, unconventional thinking, the absence of internal 'complexes' and 'inhibitions', intuition honed over many years, the depth and quality of SK states, and rigorous, systematic training with combat SK instructors in real combat conditions – these are the key components of the superhuman's miraculous invulnerability! As for ordinary martial arts training – karate, kickboxing, hand-to-hand combat and so on – this is usually practised by all sorts of people who lack self-confidence, have a fragile psyche and harbour a hidden Freudian inferiority complex. In a real combat situation, these 'muscleheads' are far more cowardly and weaker than a simple street thug who has never set foot in a gym in his life. And all because what matters most is the state of the Spirit! Either it exists in the form of a constant inner readiness to destroy any 'biological object', or it does not; there is no third option—such is human physiology, and the

from that of the superhuman! So, the inner strength of the Spirit and a constant, explosive, intuitive readiness for anything! I emphasise, for anything! But I must point out that Hitler's scientists developed all this for soldiers, not ordinary citizens, so that they might be transformed into 'supermen' and kill everyone left, right and centre! Therefore, it is forbidden for non-soldiers to practise these exercises, especially in peacetime, where there is no enemy!

Fire training technique

Since ancient times, every human being has had a genetic fear of fire, but a person who has mastered SK can withstand fire and suffer no injuries whatsoever! There are numerous documented cases where, in stressful situations, a person's clothes have burnt to ashes whilst their body suffered no damage from the fire. This means that every human body possesses natural, latent abilities to withstand fire and remain unharmed! And the triggering physiological mechanism is a mental attitude and a special state of the Spirit – SK! Every person's body is capable of fighting fire, so you must trust your body and your physical self! Nevertheless, a superhuman (i.e. a person who has mastered the SK technique) must treat every SK phenomenon, however minor, with seriousness and rigour! The correct SK technique must be followed every single time! If the superhuman's primary enemy is fear, then the second most significant enemy is carelessness, inattention and hasty overconfidence! Therefore, any manifestation of hidden powers must be treated with the utmost seriousness, and the SK technique and the physiological conditions required for demonstrating the power of the Spirit must be strictly observed!

Therefore, after entering the SK, it is essential to achieve a specific physiological effect at the point of contact with fire, which is felt as a slight coolness and a distinct numbness. You should learn to set the intention of being impervious to fire and to achieve the physiological support for this, first on individual parts of the body and then on the whole body.

Enter the SK, raise your left hand, and turn it so that the edge of your palm faces downwards.

Use self-command to induce numbness and a sensation of cold throughout the entire hand, but particularly along the edge of the palm. Light a match with your right hand and pass the flame along the edge of the palm; make sure you feel nothing!

Hitler's scientists claimed that there are three kinds of bravery: 1) a person who does not know what lies ahead but goes on anyway – this is a brave adventurer; 2) a person who knows what lies ahead but goes on anyway – this is a hero; 3) a person who knows what lies ahead but, through intelligence, technique, a trick, etc., finds a way to achieve their goal without taking any risk at all; in other words, risk must be absolutely ruled out for a true superhuman. Nevertheless, experience gained through exercises with fire should enhance the overall mastery of the superhuman or SK-human, completely eliminating any residual, unconscious fear within them, which is absolutely essential for subsequent, more complex phenomena. Therefore, the following exercise should be performed:

Exercise 1:

Roll up a newspaper, enter the SK state and set the intention for invulnerability to fire in the right hand. Once you feel a distinct chill and numbness in your right hand, light the top of the rolled-up newspaper like a torch in your left hand, and use your right hand (palm and fingers) to extinguish the fire with several squeezing movements.

Exercise 2:

Crumple a newspaper into a ball, set the ball of newspaper alight and, once it is burning, extinguish it with your hand.

Exercise 3:

Light a fire in a clearing or elsewhere, then spread out the embers and walk over them with your feet.

Exercise 4:

Overcoming fire barriers for military special forces.

Techniques for developing SK intuition

Nietzsche said that 'man is a bridge between the animal and the superman'. Scientists have established that a force of just 4 kg is needed to prevent a person from drowning in water, but in real life fear paralyses and weakens everyone, and people perish after just a few minutes, even though they could easily keep themselves afloat for several days.

What's more, a person could swim over a hundred kilometres and keep swimming for several days, but fear and fatigue prevent them from doing so, and people end up swimming and drowning; therefore, fatigue is a formidable enemy of the superhuman, and one must absolutely learn to overcome it! Fear and fatigue in difficult situations can lead to disaster; conversely, the ability to control oneself and completely rid oneself of fear or fatigue can help you in many situations. To overcome the feeling of fatigue, SK practitioners perform special SK cross-training exercises in a deeply trance-like SK state, where fatigue never arises and there is a persistent sensation that it is actually someone else doing the work. To eliminate fear and fatigue, one needs an SK state of complete detachment. People can easily go 40–50 days without any food, but the facts show that, when faced with real starvation, ordinary people become extremely frightened and, after just a day or two, grow weak, fall ill and even start eating some kind of filth or, in extreme cases, each other.

So, the key for an SK person is a special inner strength and a special state of readiness. To explain once more what this inner SK strength is, I shall recount an Eastern parable. In a certain village, the Prince hired several local residents to pelt three captured bandits with stones; the bandits were bound and brought out one by one before the stone-throwers. When the first was brought out, the stone-throwers picked up stones from the ground and began hurling them at the bandit, severely maiming him in the process. Then the second bandit was brought out; he fixed the stone-throwers with a terrifying, menacing glare, and only a few people stooped down, picked up stones from the ground and hesitantly threw them at the bandit's feet. Finally, the third bandit was brought out. When the people saw this man, a strange fear paralysed them and not one of them dared even to stir, for they all sensed the immense Inner Strength of this man, which paralysed their will and instilled a superstitious, animalistic fear that they had never experienced before in their lives. This is the true Inner Strength of a superhuman! Therefore, a superhuman must systematically and constantly train their Spirit – their Inner Strength – and be able to express it in a stern, resolute, unblinking, penetrating SK-gaze! A person is what they think of themselves! That is why we must learn to respect ourselves if we want others to respect us and

fear us! But for further professional growth, the superhuman or SK-human must also master the art of developed intuition.

The art of developed intuition is based on the skills of supersensory perception (SSP), which is now mistakenly referred to as ‘extrasensory’ perception. Today’s experts are mistaken, because intuition can operate entirely without biological feedback, i.e. without the use of the senses. Hitler’s followers established that the phenomenon of intuition is the result of the right hemisphere of the brain being activated, where emotions and images arise. This is the so-called animal or eidetic, unconscious, pictorial-sensory mind of a human being. In other words, a person possesses two inner consciousnesses – the verbal left and the sensory-imagery right; to put it another way, a person can interact with the external world not only through verbal signals, but also exclusively by means of the senses, emotions and imagery, like an intelligent animal that cannot speak but understands, feels and foresees a great deal. The sensory-imagery mind predominates mainly in children and women – this is the intuitive mind. In most men, however, the sensory-imagery mind is weak and repressed into unconscious processes. Thus, every person—especially children and women—perceives feelings and images of everything that is happening, at any distance, directly into the right brain. It follows, therefore, that our so-called ‘vague’ premonitions, visions, dreams, fantasies, desires and so on are information that is barely conscious but nonetheless genuine and objective; in other words, our intuition is an objective extrasensory channel to the outside world, and, crucially, every person possesses this channel, although it is more highly developed in some than in others. Now, the SK practitioner should carry out the following exercises to develop intuitive extrasensory perception:

Exercise 1:

The soldiers are divided into ‘first’ and ‘second’ pairs. The ‘first’ stand behind the ‘second’ and place their outstretched arms on the latter’s shoulders from the side. Both attune themselves to one another, enter the SK and begin to move forwards. The ‘first’ soldiers use their willpower to try to make the ‘second’ soldiers turn suddenly to the left, whilst the ‘second’ soldiers must sense this moment intuitively, especially as the moment the ‘first’ soldiers decide to turn, this will inevitably manifest as a slight

ideomotor (unconscious) pressure from the hands: if to the left, then with the first person's right hand; if to the right, then with their left hand, against the second person's shoulder. After walking 100–150 metres in a zigzag pattern, the two partners swap places. Once both partners have practised the exercise, they should swap partners and repeat the whole process with another soldier. Then swap partners again, and continue in this way 50–100 times. Do not eat for ten hours prior to these exercises, and do not allow yourself to be distracted during the exercises; instead, concentrate fully on your objective.

Exercise 2:

This is the same exercise, but the first soldier's hands barely touch the second soldier's shoulders. Only one pair works; the others do not interfere.

Exercise 3:

This is the same exercise, but the hands of the first participant are held 1–2 cm away from the sides of the second participant's shoulders, then 5–10 cm, then 15–20 cm.

Exercise 4:

This is the same exercise, but the first participants walk at a distance of 2–3 metres from the second participants with their eyes open and arms outstretched, then at a distance of 4–5 metres, then 10–15 metres. Only one pair continues the exercise.

Exercise 5:

This is the same exercise, but the first person stands completely still (with their eyes open) whilst the SK-Will turns the second person in different directions, but without any particular pattern, so that the second person does not think about it. At the same time, they indicate their Willpower effort with a corresponding movement using only their right palm extended forwards: the training then continues without using the hand, relying solely on mental Willpower effort.

Exercise 6:

From the group, pair up those who work best together and make the task more challenging, for example, by adding 'stop' or 'sit down', 'lie down', 'fall down', 'raise your arms', etc.

Exercise 7:

Continue the same exercise, but with any partner.

Exercise 8:

The same exercise, but the second partner is not part of the SK and does not attune to the first in any way; however, they must under no circumstances deliberately interfere or resist the emerging desires and sensations.

Exercise 9:

Once you have mastered the movements, you should learn to convey other sensations – 'sweet', 'sour', 'salty', 'touch', 'unpleasant smell', 'pleasant smell', 'the onset of pain in a specific place',
'relief from pain', conveying the sounds 'yes' and 'no', and conveying images 'circle', 'triangle', 'an image of a specific object',
'a complex picture, with sounds, smells and all the sensations of the witness'.

Exercise 10:

This exercise is designed to develop biolocation abilities. You must enter the SK and, through concentration and an effort of Will,
'warmth' in the centre of your right palm. Tell yourself that 'this sensation will arise every time as an intuitive "yes" response'. Concentrate once more and commit this sensation of 'yes – warmth' firmly to memory. Now exit the SK, raise your right hand and shake it so that the blood recedes and a neutral sensation returns. Then enter the SK, concentrate and evoke a slight chill in the centre of your right palm, memorise this sensation as an intuitive 'no' 'no'. So, 'cold' means 'no'!

Biolocation is particularly helpful for intuition in cases where the problem requiring an answer is within the direct line of sight of the person asking the question. The exercise goes like this: a partner hides an object, whilst you, holding out the fingers of your right hand, move it as if it were a locator, walk around the area and wait for your intuition to kick in, which will also be reinforced by a sensation of 'warmth—yes' in the centre of your right palm, and you will find the hidden object. Once you've succeeded a few times, make the task more challenging.

Exercise 11:

Your partner stands somewhere behind a wall. You walk along the wall from this side and, using your intuition and the sensation in your hand, try to determine where your partner is standing behind the wall and, if possible, in what position (standing upright, sitting, with a raised arm, etc.).

Exercise 12:

Looking directly at your partner's forehead, use the power of your will to put pressure on their nervous system, whilst simultaneously increasing the 'warmth' in your right palm.

Exercise 13:

Looking your partner in the forehead, use the power of your Will to relax and inhibit your opponent's nervous system, whilst simultaneously intensifying the 'cold' sensation in your right palm. Please note that the effect must be achieved through the transmission of emotions 'mind to mind' and by controlling the energy emitted by your right hand.

Exercise 14:

Your opponent tenses up, and you relax them using the specified psychological technique. Then, conversely, your opponent relaxes, and you tense them up through the power of your Will.

Exercise 15:

Using the power of your Will, improve the condition of a particular organ or part of the body, then practise causing damage. It is forbidden to practise causing damage to the head, heart or abdomen outside of a combat situation.

Exercise 16:

This is the ancient Germanic 'eagle' technique. Through an act of will, the SK practitioner enters a very deep PSK state, leaves their physical body and emerges from it in the form of an eagle. They soar high into the sky, fly wherever they wish, observe, memorise, and then return to their motionless body and emerge from the out-of-body state. In doing so, they must clearly remember where they were and what they saw, and everything they saw must be true and correspond exactly to what actually happened.

Exercise 17:

This is a practice of the 'double' technique. The exercise is the same as the previous one, except that you are yourself. You move into other rooms through walls, etc., and people there must actually see you.

The technique of erotic hypnosis

German scientists have established that a person's palms and gaze are powerful psycho-energetic emitters. In human physiology, the reproductive system is the most sensitive to 'emanations' and radiations, particularly in relation to the opposite sex. These two psychophysiological laws form the basis of the technique of sexual hypnosis, i.e. the technique of 'binding' any person to a member of the opposite sex. It is

is impossible. The technique of sexual hypnosis involves the SK-practitioner drawing the ‘victim’ into their field of vision and, through an act of will, beginning to stimulate the victim’s sexual system
the ‘victim’; at the same time, the emotional and visual impact is intensified by directing the radiating gaze towards the ‘victim’s’ genitals, as well as their head, lips, chest and navel, and then back to the genitals. Furthermore, the fingertips and palm of the right hand are also rapidly heated through the exertion of SK-Will, thereby increasing the intensity of the psychomagnetic emissions. When this exercise is performed correctly, the eyes begin to glow ‘phosphorescently’, and a white-blue glow and bright bursts of energy should be clearly visible emanating from the fingertips. As a result of this effect, the victim experiences a pleasant state akin to an orgasm and begins to feel an irresistible attraction to the SK-human that she cannot understand, whilst intuitively ‘identifying’ him immediately. Conversely, by evoking opposite feelings and images, as well as a chill in the hands and the SK gaze, it is possible to induce in the ‘victim’ an inexplicable antipathy towards the SK-person.

The Germans established that if the ‘binding’ or ‘unbinding’ technique is carried out with the ‘victim’ in direct personal contact several times, then
the ‘victim’ develops an even more enduring and intense feeling of love or hatred. Hitler’s researchers subsequently established that the sympathy or antipathy aroused in the ‘victim’ can be transferred from the SK person to any other person, or indeed to any other object or set of circumstances. To achieve this, it is sufficient to give the ‘victim’ a suggestion to love or hate the desired person, object, circumstances, etc., once – or, better still, several times – against a pre-established ‘working background’.

Researchers have noted that the tendency to fall into this mysterious state of dependence varies from person to person, but it is present in everyone, even in the elderly on their deathbeds and in infants who cannot yet even speak. There are people who are highly erotically sensitive and easily smitten, such that a single fleeting glance is enough for them to be completely ‘subjugated’ and ready for anything, but there are also those who are more resilient.

The German eidetic psychotechnique known as ‘hot-cold’ is particularly effective when there is the opportunity for direct, close contact with the opponent, when it is possible to look directly into the frontal

part of the brain from a distance of no more than 15 metres; then, through the exertion of SK-will, one can completely destroy the opponent's psyche. But this SK-gaze is particularly dangerous when directed at vulnerable people. Many peoples have long observed the dangerous effect of the SK-gaze on young children, especially infants (the so-called 'evil eye' phenomenon), which is why, in the traditions of many peoples, it is customary to protect an infant from any stranger's gaze until the protective psychophysiological mechanisms of the frontal lobes and the left hemisphere of the brain have developed; these mechanisms are capable of blocking direct contact with the right brain, where all life-support systems are located and to which the key of access is provided by images, emotions and instincts, the chief of which are the instinct for self-preservation and the sexual instinct.

The 'hot-cold' technique allows one to immediately determine, through biolocation, whether an opponent is armed or not (armed – 'hot', unarmed – 'cold'), or, for example, whether they are in possession of drugs or not, and so on. In other words, the 'hot-cold' technique can be applied in a wide variety of real-life situations and to resolve a diverse range of issues. Now let's practise an exercise that develops the ability for erotic psychoprogramming:

Exercise 1:

You transform yourself into a 'psychic' and begin treating individuals of the opposite sex. Many illnesses, particularly in women, are functional in nature and are fundamentally rooted in erotic dysfunctions. Therefore, 'psychic' treatment genuinely helps many people. You seat the patient on a chair and begin to make circular movements around their head until they experience a specific sensation of euphoric, intoxicating arousal. You then perform gliding magnetic strokes from top to bottom, from the head to the knees, until a sensation of gentle, pleasant warmth appears throughout the body and then intensifies, resembling the pre-orgasmic state of a very pleasant, inexplicable and intoxicating arousal.

After the 'session', the patient begins to feel drawn to you, and if you carry out several such 'sessions', the 'opponent' becomes programmed and falls into a mysterious dependence on you, on your words, actions, and so on.

When interacting with another person, everyone simultaneously engages both hemispheres of their brain: the left brain – through words, thoughts, ideas, logic, etc. – and the right brain – through the intonation of their voice, movements and touch, facial expressions, feelings, imagination, etc. Therefore, whilst influencing and erotically programming men requires the use of more words and pleasant logic, 'bonding' with women requires greater activation of the right hemisphere – appealing to their feelings and imagination, with more physical contact, caresses, and greater displays of emotion, etc. Signs of erotic arousal include 'glazed' eyes, a specific kind of excitement, reddening of the skin, specific facial expressions, swallowing, specific changes in voice and speech, and so on.

In the 'hot-cold' technique, the strokes of the 'magnetiser's' right hand are of great importance, as they imperceptibly and smoothly mimic the stroking of the 'opponent's' genitals or erogenous zones. Thus, through one's sexual gestures, movements, intonation and speech, it is possible to 'infect' the psyche of one or more people. As a result, these people begin to lose their critical faculties and their suggestibility increases sharply.

When carrying out erotic programming, the SK specialist must be very attentive to the 'opponent's' changing reactions and, at all times, deliberately intensify precisely those reactions that have manifested themselves, in a manner appropriate to the situation. In other words, the key to establishing contact is to elicit any reaction whatsoever, and then, by 'latching onto' it, to develop it further and elicit the reactions and behaviour
from your 'opponent'.

Techniques for influencing people through psychological manipulation

An important condition for the success of this technique is the complete absence of any doubt that a given person or group of people is subordinate to you. It is not a matter of knowing or being able to do something specific to achieve submission; rather, you simply need to be the person to whom everyone unconditionally submits. In other words, first and foremost—and most importantly—it is not about following a script for some course of action, but about cultivating within yourself a particular sense of self as

unconditional authority, a commander and a superhuman in relation to any individual or group of people, who can be perceived only as ‘biological objects’ capable of speaking. The demonstration of SK-Will and absolute self-confidence must always be present within you in the form of a special state of readiness for any challenge fate may present. When you speak, no one must ever interrupt you; conversely, you must learn to interject at the very first pause in the speech of any ‘biological object’, without reacting in any way to what they are saying.

Strategically, within the framework of influence techniques, you must always create only the illusion of a conversation; you must simply force upon your opponent the illusion of some sort of choice, but with only one outcome that suits you. The secret and distinctive feature of the phenomenon of your power of influence lies, essentially, solely in your opponent’s psyche—what sort of person they are, the nature of their nervous system, psychophysiology and so on—and the strength of your influence over them will depend on this. Conversely, the secret to the power of perceiving another’s influence lies within you yourself; therefore, do not listen to anyone—do not allow it—especially as what could a mere ‘bio-object’ possibly tell you that you do not already know?

An SK practitioner must learn to master all seven suggestive vocal modes of speech, ranging from a soft, relaxing and slow tone that fades away until the words can no longer be distinguished and only the sound of the voice is heard, – to a stern, harsh, loud tone, and on to a sharp, sudden ‘command-shout’, from which any ‘bio-object’, even if not killed, would freeze for 1–2 minutes, unable to move, in a state of deep shock or stupor.

You must learn to control your intonation, to raise it when you need to rouse a ‘bio-object’, and to lower it when you need to relax and calm down either that individual or a whole group of ‘bio-objects’. Now you need to carry out a few training exercises to get a feel for the role of a commander, or someone who is always right and always gives orders.

Exercise 1:

This exercise is called ‘The Investigator and the Accused’. You are the ‘investigator’ and sit at a desk, whilst the ‘accused’ sits on a chair opposite your desk. Your task is to demand that the accused recount their life story in detail, whilst you practise

permissible them pauses to his with leading questions.

Exercise 2:

Any psychological influence begins with a glance. A glance can encourage a person and stimulate their behaviour; conversely, it can bring them to a sudden halt, or simply convey indifference or even anger, and so on. The exercise is called
'Human Resources'. You are sitting at a desk when someone knocks and enters to enquire about a job. Your task is to learn to look at the person entering with a blank, vacant stare, causing them to feel flustered and bewildered.

Exercise 3:

1) This exercise is called 'The Magnet'. You stand opposite the 'subject', 3 metres away, and using magnetic gestures and your gaze, you attract, repel or rock
the 'bio-object'.

2) Do the same thing, but using only your torso and gaze, without your hands. 3) Turn the 'bio-object' so that they are facing away from you and, using your hands,
, pull it towards you, push it away or simply make it sway.

4) Do the same, but using only your gaze.

5) Turn the bio-object and, using your SK gaze, tilt it to one side.

6) Using your SK gaze, prevent the bio-object from moving from its spot, no matter how hard it tries.

Exercise 4:

The aim of this exercise is to stimulate the bio-object with a gentle upward movement of the right palm, and to slow them down and help them relax with a gentle downward gesture. It should be noted that only some people—mainly those with psychotechnical disorders or mental health conditions—are unresponsive to or do not react at all to suggestive gestures.

It should be noted that this technique of influence does not work well on people who are self-assured and content with everything; therefore, you must always (I emphasise, always!) first dislodge the 'bio-subject' from a state of confidence and make their behaviour appear uncertain, disoriented, and possibly even intimidated.

If you do have to listen to someone, you must fix your SK gaze slightly below the 'bio-subject's' eye level, and when you are speaking,

your SK gaze should be directed slightly above eye level, and if pressure is required – straight into the left pupil. At the same time, you must always remember that it is precisely the SK that allows you to impose a visual target image on the ‘bio-object’ and ensure that the ‘bio-object’ exhibits the reaction or behaviour you require. You are, as it were, artificially hallucinating what you want, and this begins to happen in reality – this is what power hypnosis is.

Exercise 5:

The task is to learn to stop, with your gaze: a) the ‘bio-object’ walking towards you

‘bio-object’ walking towards you; b) a ‘bio-object’ walking away from you.

Exercise 6:

To make a ‘bio-object’ fall: a) one coming towards you; one moving away from

you

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Exercise 7:

The ‘bio-object’ thinks of a number several times, ranging

one to 10, and you try to guess it!

Exercise 8:

You impose the ‘bio-object’ a number, which it it

Do this several times!

A few words about clothing: what an SK practitioner needs to know. For most people, their clothing reflects their current psychological and emotional state; for example, black clothing conveys authoritarianism, an aversion to others, perhaps grief or, conversely, triumph. Red clothing conveys an aggressive state; grey, a confident calm; green, selfishness; and checked or striped clothing, neuroticism. Furthermore, it is important to know that the upper half of one’s clothing represents a person’s emotions, the lower half symbolises sexual orientation, and footwear indicates ‘where the feet are heading’. When a person gets dressed, they think they are guided by what they like and what suits them, but in reality, people put on certain items unconsciously, guided solely by their psycho-emotional state. Based on the above, it follows that an SK person can use their clothing to programme both themselves and a ‘bio-object’.

Psychological map:

It is important to know that if a ‘bio-object’, when addressing you, tilts their head slightly to the right or slightly to the left, this indicates that the left (rational-logical) hemisphere of their brain dominates, or the right (sensory-imaginative and artistic) hemisphere, but the left brain controls the right half of the body, whilst the right brain controls the left. This means, for example, that if a ‘bio-object’ is left-handed, their right brain is dominant; whereas if, for instance, the facial expressions on the right side of their face are more developed, their left brain dominates in their resulting external psyche.

So, if something is more developed on the left side of a ‘bio-object’, then they
an ‘emotionalist’, and if on the right, then they are a ‘rationalist’. If both halves of the body are developed harmoniously, this also indicates the harmonious development of the psyche.

With regard to different ‘bio-objects’, there are several basic strategies which are based on the psychophysiological type of the ‘bio-object’.

The psychological map divides people into ‘passive’ or
‘active’ types: sociable extroverts or reserved introverts. If the ‘bio-object’ is ‘P-E’ (passive extrovert), this means that they are outward-looking and sociable, but prefer to observe everything from the sidelines without taking any action themselves; such a ‘bio-object’ should be given a specific task, with strict deadlines set and a clear understanding of their personal responsibility. They need to be given something to keep them personally occupied at that moment, and it is precisely at that moment that they should be programmed.

If the ‘bio-object’ is ‘A-I’ (an active introvert), this means that their mental activity is directed inwards towards themselves; therefore, to influence such a ‘bio-object’, one must first say:
‘Imagine…’ and only then should one proceed to programme them.

If they are ‘A-E’ (active extrovert), this means that their psyche is active and directed outwards, and such a person must be subdued by even greater activity or by suppressing their activity through inducing a stupor.

If they are a ‘P-I’ (passive introvert), then such a ‘bio-object’ simply needs to be given a book or materials to read that would convince and reorient them. Incidentally, most psychologists are ‘P-I’, whilst psychiatrists are mainly ‘A-E’.

Each of the four types of people mentioned will, sooner or later, find their niche in society, but the highest positions are usually occupied by ‘A-E’ types, who, no matter what happens to them in life, will always pick themselves up again. The other three types of people can generally only achieve something in society with someone else’s help, rather than on their own.

In addition to psychological orientation, the psyche of most people also exhibits one distinct ‘psychiatric’ tendency, which an SK-person must be aware of in order to better manage ‘bio-objects’. I shall present the ‘psychiatric’ types in the table below:

		Параноиды		
Синдром Клерамбо	Невротики	Противоречивые	Истерики	Циклоиды
		Шизоиды		

Brief characteristics: the schizoid – lectures everyone; the paranoid – believes that everyone is deliberately acting against him; the neurotic – trembles, is nervous; Clerambault’s syndrome – he always feels that someone is ‘leading’ him, ‘controlling’ him, etc.; cycloid – someone who is constantly changing; hysteric – prone to outbursts, hysteria, etc.

Apart from ‘psychological’ and ‘psychiatric’ types, all people can be divided into two categories: 1) those prone to compulsive psychophysiological dependence; such people join clubs, courses, religious sects, etc. and even if you expel them from this, for example, sect, they still cannot be free; sooner or later – and more often than not immediately – they find themselves back in some sect, movement, and so on, sometimes one that is completely opposite to the one they were in at the start; that is to say, the issue here is not one of beliefs, but of a tendency towards psychophysiological dependence; for example, if it is a woman who has been deceived and abandoned, she will, as if nothing had happened, believe again, get involved again, be deceived again, and be left with nothing again; yet she is bound to find someone else and be deceived again, and so on endlessly, because that is the sort of person she is—a person prone to psychophysical dependence; 2) Conversely, there are people who are prone to independence and isolation;

such people, if they join any group, are bound to cause a split, a rift, a confrontation, and so on.

Apart from the types of people mentioned above, there are those who seem to feel responsible for everyone and everything, and this has a strong and noticeable effect on their behaviour and actions, whilst others, on the contrary, tend to feel responsible only for themselves and couldn't care less about anyone else. If one of these traits is detected in a 'biological target', the SK operative must exploit this weakness and skilfully play on it.

A powerful method of unconscious suggestion is emotional hypnosis, i.e. the psycho-emotional contagion of the 'bio-object' with the emotion you require. If you nod to the 'bio-object', it nods back; if you yawn, it yawns, and so on—in other words, hypnotic induction occurs, if you smile at them, they smile; if you become alert, they become alert; if you become frightened, they become frightened; if you become sad, they become sad, and so on. A tendency towards emotional contagion is a weakness, and an SK practitioner must not have uncontrolled emotions; however, when they detect such a weakness in a 'bio-object', they must be able to exploit it. An SK specialist must learn to sense the true emotional state of any 'bio-object', and to do this, they need to practise the following exercise:

Exercise 1:

The bio-object enters one of several intense emotional states – joy, anger, sadness, grief, tension, fear, sexual desire, the desire for food, the desire to drink, the desire for sweet things, the desire for sour things, the experience of pain – sequentially in several locations, and so on. The task of the SK specialist is to enter the SK, empathise with the bio-object's state through identification, genuinely feel this within themselves, and determine what the 'bio-object' is feeling and desiring.

Exercise 2:

This is the same exercise, but the 'bio-object' tries to conceal its inner desire by outwardly feigning a different emotion; for example, it may be experiencing grief internally whilst outwardly feigning joy, or it may be thirsty whilst feigning sadness, and so on.

Mastering these two exercises enables one to acquire the skills of practical psychological testing, which will allow the SK specialist, by looking slightly below or slightly above the 'bio-object's' eye line, to sense their true emotional state or their

true state, and even their intentions and desires. An SK specialist proficient in emotional hypnosis (for further details, see my book
‘Emotional Hypnosis’, 1996, 700 pp.), acquires skills in a targeted system of techniques for covert psychological influence, in the form of words, emotions, gestures, posture, breathing, etc. (for further details, see my book
‘Psychological Hypnosis in Waking Life’, 1995, 650 pp.).

For a more thorough training of SK specialists, I strongly recommend reading the following books of mine: ‘The Technique of Mental Hypnosis’, 1995, 700 pp.; ‘The Secret Potential of Man’, 1995, 650 pp.; ‘Aryan Hypnosis’, 1995, 500 pp.; ‘Russian Hypnosis’, 1995,
500 pp. These books are a must-read! They contain more detailed information for practising SK, particularly the book ‘SK. The Universal Technique of Hypnosis’, 1994, 700 pp. All the books listed, and all my other books, should become standard reference works and must be included in everyone’s personal library; this applies to anyone whose profession involves working with people or who wishes to realise the amazing and extraordinary abilities hidden within each of us.

So, continuing with the lesson, I would like to point out that if someone is unemotional and does not react to anything, they make everyone around them feel uncomfortable; conversely, if someone is emotional, everyone around them is involuntarily influenced by their mood and, importantly(!), their desires and goals. Therefore, we need to do one more exercise:

Exercise 3:

Within the group of ‘bio-objects’, first establish the required emotional backdrop, and then trigger the desire to acquire or do something, etc., as you had planned in advance; in other words, you intended for all these ‘bio-objects’ to want to do something or start doing it, etc. For example, put everyone in a cheerful mood, and then suggest that, to mark a birthday or some other occasion, everyone should ‘chip in’ as much as they can to buy a present for the person you have in mind, which you will then present to them on behalf of the ‘group’. I would like to point out that an SK specialist, as a rule, instils an automatic fear in most animals, except for felines. Felines usually remain in the SK state themselves all the time and behave towards others—including humans—as
‘a superhuman towards a bio-object’. So, a superhuman is a machine designed to

subjugating everyone and everything to themselves! Therefore, the superhuman must constantly remain in a state of pre-activated SC. For an objective psychological self-assessment of your personal psychodynamics, you should, a couple of times a week whilst in the SC state, look at yourself in the mirror for 2–3 minutes and analyse who is objectively standing before you, what sort of person this really is, what they actually want in this life, how they understand this life, and what actually works out and what does not. The result of this self-analysis will be a more or less objective self-assessment of your current real capabilities and how they are evolving.

The inner essence of the ‘bio-object’ is ‘revealed’ by two things: the left brain is ‘revealed’ by the words the ‘bio-object’ chooses and what they say, whilst the right brain is ‘revealed’ by the intonation of their speech, facial expressions, gestures and, most importantly, emotions – or rather, the way they are expressed. This is why it is said that the way a person expresses an emotion, such as laughter, reveals their deepest inner nature. It follows from this that a good covert form of suggestion is the method whereby, whilst conversing with the ‘bio-object’, you say something whilst using intonation to emphasise certain words or expressions – specifically those which, as a covert suggestion, you wish to implant into the ‘bio-object’s’ psyche. With this technique, you can structure the entire interaction with the ‘bio-object’ as if you were talking about someone else; indeed, you may even be speaking to another person, but with the ‘bio-object’ as the intended recipient. The result is that the ‘bio-object’ is merely a witness to what is happening; however, as they hear and see everything, the information will covertly enter their brain and, unconsciously, begin its internal work there, prompting the ‘bio-object’ to take the actions you require.

Another method of influence is the technique of psychological aikido, which involves not responding with harsh resistance, but rather with actions that draw the opponent into behaviour you have planned in advance. For example, if the ‘bio-object’ is strong-willed and speaks to you harshly, you must not react even more harshly, as this will lead to conflict and your plans may be derailed; instead, you respond with ‘pa’ as if agreeing, and then calmly state your case. The principle is this: firmness should be met with SK softness, and softness with SK firmness. In specific situations,

, you should generally apply both approaches as the situation demands – using firmness and gentleness, as well as cunning and the SK technique.

The 'Ghost Person' technique:

If an SK specialist needs to remain very inconspicuous amongst certain 'biological targets', the following recommendations should be observed:

1) Avoid bright clothing; wear grey during the day and black at night, like a ninja. Move without any sudden movements.

2) You must move smoothly at all times.

3) There must be no internal tension, and your gaze should be directed 45 degrees forward and downwards.

4) You must not merely try to be inconspicuous, but actually be so that no one remembers you. You must have no doubts about your inconspicuousness.

5) You need to be able to create 'moments' that distract everyone, and it is precisely at these moments that you must achieve your objectives. For example, something catches fire; everyone's attention is diverted, and as a result, you gain greater freedom than before to act unnoticed. Another example: a sudden, very loud argument and brawl between two people, which has diverted everyone's attention, and so on.

6) If discovered behind enemy lines, an SK specialist must be able to turn any object into a fearsome weapon; and if nothing is available, then through the power of SK-Will, one must be able to turn one's fingers into a dagger, one's fist into an iron hammer, and one's hand into a sword! The SK destruction
of 'bio-objects' must be carried out 'from the heart', spontaneously and in a manner appropriate to the situation.

7) An SK specialist must master the art of manipulating time and, through the power of Will, be able to speed up or slow down time. Moreover, they must be able to do this not only in relation to their own perception of time, but also be able to influence the opponent's perception of time. With good training or the aid of special preparations, it is possible to eliminate more than 5–7 people in hand-to-hand combat in less than 1 second! It is also possible to manage to pass invisibly between two rows of security guards,

standing 2–3 metres apart! By mastering even more advanced SK techniques, one can master the art of teleportation—that is, to move instantly and completely invisibly from one place to another, even over vast distances, utilising the phenomenon known as the ‘third reality’.

The ‘human-stream’, ‘human-shape-shifter’ and ‘human-scanner’ techniques:

The ‘flow-person’ technique is required for an SK specialist to create a special psychophysical ‘state of flow’ within themselves. This is achieved through autosuggestion in SK by visualising that you are tied from behind at the waist in the swift current of a mountain river. But now, behind you, the water level rises sharply and begins to press down hard from below and up from behind; and if some force were not holding you by the belt, you would have been swept away long ago and, together with the current pressing from behind, would have rushed forward frantically. Finally, the pressure of the current from behind has risen above your head; it is impossible to hold back any longer, and the command is given
‘Forward’ – the tether is released, a jolt follows, and you rush forward at breakneck speed! The technique for transforming into a werewolf and a scanner is similar. To navigate well in the dark and see with your sixth sense, you need to perform the following exercise:

Exercise 1:

Look straight ahead and, using your SK vision, really, physically sense the front wall of the room, then the left-hand side wall, then the right-hand side wall, then the back wall, then the ceiling at the front and at the back.

Exercise 2:

A ‘bio-object’ 3–4 metres behind you either raises an arm or a leg, or squats, or starts moving to the left, or towards you, etc. Your task is to sense what it is doing!

Exercise 3:

The same as before, but now you must also sense what they are about to do!

Exercise 4:

‘Bio-object’ lays into boxes a box a few matches, you look at the box and say how many matches are in it, then look at

the ‘living being’ and say what’s in their pockets, then say what the ‘biological subject’ is thinking, what they want and what they’re going to do!

These exercises are sufficient for any soldiers and intelligence officers, whilst the remaining, more complex Hitlerian psychological techniques are intended solely for the highest leadership of the army and the country.

THE TWINS' RIDDLE

Almost everyone has an astronomical twin. These are people who were born in the same year, on the same day, at the same time and in the same place. In a large city, this is quite a common occurrence.

Indeed, if cosmic forces do influence a person and their life in a certain way, then the effect of these forces can be demonstrated by comparing the life events of people born at the same time and in the same place.

Such studies have been carried out, and the main conclusions are as follows.

100 per cent of the cases studied show parallels in the lives of 'astronomical twins'. They contract similar illnesses at the same time and suffer identical injuries to the same parts of the body – at exactly the same time. They tend to marry and have the same number of children, achieve success, suffer accidents and even die… at exactly the same time! And this cannot be attributed merely to a strange coincidence.

There is a considerable body of historical evidence confirming the existence of astronomical twins.

Some of these can be used directly in the new novella *The Prince and the Pauper*. On 4 June 1738, two completely different boys were born in London: one was Samuel Hemmings, a commoner, and the other was King George III.

Samuel became a blacksmith and set up his own business on the very same day that George ascended the throne, 15 October 1760. Samuel and George both got married on 8 September 1761; they fell ill and suffered injuries at exactly the same time. Every significant event in one man's life also occurred in the other's, albeit with the appropriate variations dictated by their social standing.

On 29 January 1820, King George died, and on the very same day, the blacksmith Samuel Hemmings also died.

Here is another example. George IV, Prince of Wales, was born at the same hour and in the same place as a boy who went on to become a chimney sweep. His parents,

upon learning of this coincidence, nicknamed him ‘Prince George’. The Prince of Wales’s illustrious life had nothing in common with the fate of the wretched chimney sweep. However, on the very same day, the Prince of Wales was ‘admitted’ to court, whilst the chimney sweep ‘set up’ his own business. Both were known for their extravagance, their love of drink, their excessive interest in the fairer sex, and their passion for gambling. A fascination with horse racing led the chimney sweep—aka ‘Prince George’—to acquire the finest race…donkey, whilst George IV owned the finest race pony. On the day that ‘Prince George’ was kicked by his beloved donkey, George IV was struck in the ribs by a horse. Both departed this mortal world on the very same day.

History also offers us facts relating not only to the fates of kings and princes.

Dr Wilson describes the story of Bobby John and Betty Ellen, born on 19 August 1930 in North Carolina. During their lifetimes, both suffered a similar accident which led to mental illness.

On 11 April 1962, at a psychiatric clinic in Morgantown, the doctor on duty discovered Bobby John’s body during the night. Aware of the strange coincidences in these people’s lives, the doctor rang Betty Ellen’s home. Neighbours reported that she was dead. Here is another case. On 10 September 1956, the California State Police recorded an accident on a motorway near San Francisco. Both drivers were killed in a head-on collision between two cars. Whilst drawing up the report, it was discovered that both had been born on 5 September 1933 in Los Angeles.

The last thing Anna saw in her life was the dense greenery visible through the windows of the tilting aeroplane… After crashing into the trunks of taiga trees, the ‘YAK’ exploded.

At that very moment, thousands of kilometres from the crash site, in a small town, in the workshop of a garment factory, right behind the cutting table, Anna’s 48-year-old twin sister, Vera, died of acute heart failure. She only managed to whisper to her friend, who had rushed to her aid:

‘It’s so terrifying… I’m falling… we’re going to crash…’

This is just one of thousands of cases documented by science as evidence of the existence of mysterious links between

twins, which persist throughout their lives. Astonishing cases have been reported in the American and British press. Twin brothers born in Ohio were adopted by different families as infants and did not meet until almost forty years later, when they were astonished to discover that both were called James, both were lawyers, both enjoyed sketching and drawing in their spare time, and both loved carpentry. Each of the brothers had married a woman named Linda, and each had a son. Only one of the sons was called James Alan (with one 'l'), whilst the other was called James Allan (with two 'l's). Each of the two families had a dog called Toy.

After 26 years apart, a pair of twin sisters who had been separated shortly after birth were reunited. They lived in different states, but both were hairdressers, and both had daughters named Christina.

The twin sisters Bridget and Dorothy, who had been separated as children and were effectively meeting for the first time after many decades apart, were astonished to discover that one of their sons was called Richard Andrew, whilst the other's son was called Andrew Richard.

There are many examples of such parallels; for instance, in our country's Far East lived a former major, Banshchenko, who had been discharged on grounds of disability and who limped on his left leg, which had been injured at the knee during military exercises. With great difficulty, he tracked down his twin brother, from whom he had been separated as a child by the war. The second Banshchenko limped on his right leg, which had been injured in a fall from a motorbike.

It must be said that the so-called 'mirror effect' in twins has long been observed: often one is left-handed, the other right-handed; the hair on one's head grows in a clockwise direction (as if in rings from the crown), whilst on the other it grows in the opposite direction.

How, then, can these coincidences be explained, which, even at first glance, seem to contradict the theory of probability? The eminent American scientist Louis Keith, who studied this problem and who, incidentally, also had a twin brother, put forward the view that such parallels are based on a constantly maintained connection between former neighbours in the womb. According to Dr Keith, there is a certain hierarchy in the levels of this connection. The first level involves the transmission and reception of sensations, emotions and feelings. The second level involves the exchange of specific thoughts. And finally, the third

level involves the transmission and reception of pain signals. Such contact often ends tragically, as was the case with the twin sisters Anna and Vera mentioned earlier.

In the mid-1960s, a similar hypothesis was put forward by the Soviet scientist, Doctor of Medical Sciences L. Sukhabersky. He believed that a biological connection exists between biologically related people (mother and child, twins), which is usually dormant and only activates in very important or extreme circumstances.

Researchers studying the twin phenomenon have long noted the striking similarities between identical twins, particularly those living together. The twins themselves also speak of this. They report that they often say the same phrase at the same time, have identical dreams, set out the same ideas in their school essays, express them using the same phrases and make the same mistakes, are friends with the same people, and fall in love with the same girls or boys. If one of the twins develops diabetes, the other soon follows suit; and if one has appendicitis, they often have to undergo surgery on almost the very same day.

Twins usually share common interests and identical talents. Johann Sebastian Bach's father, Johann Ambrosius, and his twin brother, Johann Christoph, were very much alike. Their speech and way of thinking were all the same. In music, too, it was impossible to tell them apart. They played in the same way and developed themes in the same way. If one was ill, the other was ill too. There was a similarly striking resemblance between the twin opera conductors Wolf and Willy Heynitz. Their similarity in the interpretation of musical works and their conducting style was so great that, during the interval, they could swap places and none of the singers, orchestra members or the audience would notice the substitution. The twins Auguste and Jean Picard possessed similar talents. Auguste became a physicist, whilst Jean became a chemist. The former was appointed to a chair in Belgium, the latter in America. Both became famous for their flight into the stratosphere.

Sometimes the resemblance between twins separated shortly after birth is no less striking. In 1899, a Frenchwoman, M.G., and an American, D.G., had twins. In fact, by

By the time of this significant event, they were no longer husband and wife. The couple had travelled to Paris from Texas, as it was easier to obtain a divorce there. Under the harsh laws in force at the time, the newborn was to remain with his father. A black wet nurse, who had travelled with the couple, was assigned to look after him. In short, everything had been planned in advance. The only thing they had failed to foresee was the possibility of twins. In the court's divorce decree, every clause of this document determining the newborn's fate was written in the singular. The French authorities, seizing upon a technicality, sided with the mother and offered the father the chance to take either of the babies overseas. Undoubtedly, D.G. would have secured custody of both sons, but this would have required a review of the divorce decree, which would have taken a considerable amount of time and incurred additional costs. The divorced husband resigned himself to the situation; as a result, one child went to America, whilst the other remained in France.

Until the age of fifty, the twins had no contact and were not even aware of each other's existence; however, their life stories turned out to be surprisingly similar. Both had played sport since childhood, did well at school, and both showed a talent for physics and mathematics. After completing their secondary education, the young men went on to study and became electrical engineers. At the age of 24, they both got married; two years later, each family welcomed their first child, and a further four years on, their second. The brothers had been keen stamp collectors all their lives; at the age of 45, they both contracted tuberculosis and died almost simultaneously, less than a year short of their 60th birthdays.

LECTURE BY V.M. KANDYBA ON SK AND HYPNOSIS

I have summarised a lecture given by my father – Victor Mikhailovich Kandyba, President of the World Association of Professional Hypnotists – which he delivers as part of training courses for anyone wishing to become a professional hypnotist in Petrograd, Leningrad or St Petersburg, at 9 Malaya Morskaya Street, flat 34, tel. (812) 219-11-98:

"Ancient Russian and modern hypnologists identify four distinct personalities within a person: two external and two internal. The physiology, psyche and behaviour of the external personality are determined by the psychophysiology of a person's ordinary state of consciousness (OSC) whilst in a normal, healthy waking state and capable of to remain more or lesssoberly, appropriately and plausibly assess and respond to events in their external and internal environment.

The psychophysiology and behaviour of the hidden or true external personality are determined by a trance-like state of consciousness, which, throughout the world except in Russia, is known as SK. In Russia, however, most people refer to this state of consciousness as 'hypnosis', i.e. the term coined by the English surgeon Brade in 1843, when he witnessed a performance by the magnetiser La Fontaine. However, many years of research by Gurdjieff, Blavatsky, Bekhterev, Ukhtomsky, Dovzhenko, Erikson and my own have shown that unusual human trance states do not fit within the theoretical framework of the phenomenology of hypnosis. In 1970, I developed a unified theory of the wide variety of human trance states, of which there turned out to be over twenty, and now more than thirty have been identified. In light of the discovery of a vast number of new trance states, I was compelled to abandon the term 'hypnosis' once and for all and named this whole new diversity 'SK' (the Kandyba state). I retained within the term 'hypnosis' everything that Breard and Pavlov had attributed to it, that is, the entire phenomenology of 'artificial sleep accompanied by rapport'. In 1984, I first achieved, on my son Dmitry, practically

such extraordinary SKs, of which the global scientific community had previously only heard through Eastern myths and legends. The new SKs were named SK-2, SK-3, SK-4 and so on. From 1984 onwards, SKs spread rapidly throughout Kyiv, and subsequently across the entire USSR and the whole world. Thus, a person's true external personality is determined by the psychophysiological characteristics of a specific SK (hypnotic, emotional, psychedelic, psychological, sexual, age-related, pathological, biocritical, meditative, isolative, prosomnatic, pre-death, cataleptic, etc.).

The functioning of both external personalities – the outer (or illusory) and the trance (or true) – is defined as the constantly changing (impermanent) result of the simultaneous activity of a person's two independent internal personalities: the left-hemispheric and the right-hemispheric.

When the activity of the outer personality (OP) decreases, a person's trance or true personality is revealed. This means that in the TP, depending on the content and dominance of the left or right hemisphere of the brain in the resulting neuropsychophysiology, we have a vast spectrum of a person's true states – ranging from vice to bestiality and villainy, the likes of which are not even found in the animal kingdom. Thus, the SK (trance) lays bare the true nature of a particular person; this is why the Russian saying goes: 'What a sober person keeps in their mind, a drunkard lets slip from their tongue'. In other words, a trance more clearly reveals which hemisphere's activity predominates in a person's overall psychophysiological activity – their left-hemispheric ideas, attitudes, experience and sober analytical mind, or their powerful right-hemispheric animal instincts, drives, feelings, emotions and so on.

The left hemisphere of the brain is our subconscious, our internal censor, in which a person stores everything they have managed to learn in their life, starting from the moment they learnt to understand speech and become aware of themselves as a separate, thinking individual. Our inner subconscious is our left-hemispheric personality, in which all our acquired life experience, our knowledge, ideas, beliefs, attitudes, ideals, our memory and speech centre are stored; centres for receiving, verifying and processing all incoming information, and so on.

Our right-hemispheric self is our unconscious; it comprises drives, feelings, emotions, eidetic imagery, intuition, a sense of proportion and beauty, our fantasies, forbidden desires, our dreams and visions, and our inner world of raw physiology and beautiful illusions…

Whilst the nature of the unconscious right-hemispheric self is dominated by the primary instinct for self-preservation in its simplest forms—namely, the sexual instinct and biological needs (sleeping, breathing, eating, drinking, etc.)— then the nature of our subconscious left-hemispheric personality is dominated, first and foremost, by our social attitudes and the personal experience we have acquired, shaped by the brain's memory mechanisms. It is precisely through each person's individual social and sensory experience that incoming information is constantly filtered and verified.

Therefore, human perception depends 90 per cent on the content of this experience; that is, it depends on our thoughts, attitudes and the emotions we have experienced (in other words, on the content of the left and right hemispheres). It could be said that our thoughts, attitudes and the strongest emotions we have experienced in life constitute the core of our 'true inner self', which fully determines
the 'artificial outer self'. The Old Russian tradition has always distinguished between 'thought and feeling' or 'mind and heart' within every person. Here, 'heart' refers to our inner feelings. And 'mind and heart' were not always in harmony…

The inner experience and content of both hemispheres – the left subconscious and the right unconscious – are formed partly consciously, partly semi-consciously and mainly unconsciously, especially when our consciousness dislikes something or has a prohibition against something, as a result of our upbringing, the influence of personal attitudes and those of our environment, moral or social taboos, and so on.

As for accumulated sensory experience, and particularly acute stressful situations, these are automatically and unconsciously recorded by right-hemispheric brain mechanisms for life and sometimes exert a serious and decisive, fixating, pathological influence on the rest of a person's life. In

this sense, Freud was right when he proposed the psychoanalytic theory of extracting from the patient's unconscious the pathological feelings and attitudes fixed there, which destructively distort normal perception, a normal sense of the world, and the normal functioning of the entire psychophysiology. Freud brilliantly foresaw that, in order to extract a traumatic situation from the unconscious, it is necessary simply to relive it, but consciously. At that time, science was not yet aware of interhemispheric asymmetry and the role of the right hemisphere, so Freud simply and brilliantly surmised that if one wishes to extract something from the right hemisphere and 'release' it, one must pass that 'something' through the brain mechanisms of the left hemisphere—that is, simply recall it and become aware of it against a new, emotionally neutral backdrop.

SK specialists and hypnologists know that people relate to one another in ways that are completely out of step with reality, but rather according to certain purely internal 'strange' attitudes—that is, sometimes with unexpected sympathy, sometimes neutrally, and at other times aggressively and hostilely. Pre-existing internal attitudes and past emotions determine not only the interaction between the hypnotist and the subject, but also form the very essence of all human communication, whether it be with another person, a work of art, nature, a book, a woman, a cat, a table, a plate, and so on. This means that the perception of the vast majority of people is deeply subjective, and they see, hear and feel in two ways, and only through the prism of their inner selves – the left-hemispheric and right-hemispheric. When, in the early 1970s, I discovered that the left hemisphere is an independent personality which lives, perceives and reacts of its own accord, has its own opinion on any matter, possesses its own way of thinking and communicating, and has its own neural mechanisms for receiving, processing and storing information and experience, and so on, I was deeply shocked and spent a great deal of time wondering how it could be that no one before me had managed to discover this. My research then led me to discover the independent existence of another, right-hemispheric personality, which is completely distinct from the external and trance personalities and, at the same time, has nothing in common with the left-hemispheric personality; on the contrary, it possesses entirely independent brain mechanisms for receiving, processing and comparing external and internal information,

possesses its own eidetic thinking and its own language in the form of images and emotions.

Therefore, taking all of the above into account, the modern SK science, developed jointly with my son D.V. Kandyba, asserts that the main characteristics of a person's inner personalities are:

I. A personality based primarily on the psychophysiology of the left hemisphere:

1) A person's language consists of external and internal speech.

2) Way of thinking – verbal logical thinking.

3) Key characteristics – stores all experience, performs the functions of critical analysis and moral and social censorship, and is the focal point of consciousness and self-awareness.

II. A personality based primarily on the psychophysiology of the right hemisphere:

1) Language of the personality – images and emotions.

2) Mode of thinking – eidetic, pictorial thinking.

3) Key characteristics – animalistic, instinctive consciousness; ensures the involuntary reliability of the brain's (central) mechanisms of biological self-regulation and life-sustaining functions.

Based on the theory outlined above, to hypnotise a person or induce a state of deep trance means suppressing the activity of the left hemisphere as much as possible, replacing its psychophysiological role with an external stimulus (for example, the hypnotist's voice) and, thereby depriving the resulting external personalities of the ability to think consciously and logically and to analyse adequately, switching the functioning of the entire brain to the SC mode, that is to say, from left-hemispheric, dominant and conscious logical thinking to right-hemispheric, subordinate and unconscious eidetic, sensory-imagery thinking.

In SC science, taking into account the psychophysiological characteristics of the human brain's functioning, there are several main types of psychotechnics for immersing a person in the SC:

1. Psychological techniques are methods that primarily involve verbal induction of the SC by influencing the left hemisphere. An example of such techniques is the world's leading psychological technique

‘psychological SC’ by D.V. Kandyba, the Dovzhenko method, the Erickson method, the neuro-linguistic programming method, the Dubois method of logical-rational psychotherapy, the Bekhterev persuasion method, and others. All techniques in this class are recommended for individuals whose mental activity is dominated by the left hemisphere. These are typically educated, logically minded people – scientists, mathematicians, teachers, physicists, chemists, engineers, military personnel, lawyers, police officers and civil servants, doctors and, in general, many middle-aged men. For further details, see D.V. Kandyba’s book *Psychological Hypnosis*.

2. Mental imagery psychotechnics are methods of ‘forceful’ or mental hypnosis, based on the technique of eidetic contact and the mental identification of the hypnotist with the subject through imagery, and on inducing the desired reactions and behaviour in the subject by visualising the required behaviour in the imagination. Such methods are known as ‘mental hypnosis’ and act upon the right hemisphere through the language of mental images; consequently, they are perceived by the hypnotised subject unconsciously and automatically. The hypnotised person is unable to resist this psychological technique; for this reason, Old Russian priests referred to such techniques as ‘magic’. These psychological techniques are described most vividly in D.V. Kandyba’s book *Mental Hypnosis*, as well as in A. Kuprin’s novel
Olesya, and in V. Bekhterev’s work *Hypnosis. Suggestion. Telepathy*, in which Bekhterev describes in detail his own mental technique for inducing a specific behaviour in a dog.

This group of mental hypnosis techniques is applied to individuals who are highly impressionable, characterised by extreme sensitivity, and capable of intense empathy. This technique is often applied to individuals who have previously been induced by this particular hypnotist into a deep somnambulistic trance, characterised by heightened general sensitivity and a marked increase in selective sensitivity specifically towards this hypnotist. Before me, the most prominent hypnotists to have worked on this were Platonov and, in particular, Vasilyev. Abroad, there is still nothing of the sort, which is why none of my contemporaries, apart from myself, can influence a person mentally from any distance. The leading foreign specialists – the Indian Prapzupada, the Japanese

Suzuki, the American Erickson, Franciszek Shertok, the German Schulz and others—have not even conducted research in this field, so Russian hypnologists, thanks to the work of D.V. Kandyba, have surged far ahead in these psychotechnics, pulling ahead of the US, for example, by 200–300 years, if not more; indeed, it may well be that the Americans will never master the secrets of these psychotechnics – that is also a possibility. These psychotechnics are applied to artists, film directors, actors, performers, designers, fashion designers, doctors, widows, children and, in general, to many young and middle-aged women.

3. Emotional-ecstatic psychotechnics are the ‘ecstatic SK’ or ‘techniques of emotional hypnosis’, which he described for the first time in the world in his book *Emotional Hypnosis*. The psychotechnics of emotional hypnosis are applied in situations of intense feelings and emotions, as well as to people who are highly emotionally volatile. These techniques are used by politicians, gifted teachers and tutors, lecturers, public speakers, military leaders, actors, performers, etc., in relation to people united by a single induced feeling and mood, or a single shared emotion or collective experience, etc. Emotional hypnosis is applied to people with an unstable social position, those who are uncertain about their future, or those who are disoriented. These psychotechnics are recommended when working with children, adolescents, young people, women, the creative intelligentsia, etc. The effect of these psychotechnics is designed for individuals whose psychophysiology is dominated by the right hemisphere. This is why emotional hypnosis is highly effective amongst primitive peoples (the USA, Australian Aborigines, many African peoples, etc.). Thus, emotional hypnosis is recommended for people whose ‘emotions overshadow reason’; consequently, such people must be managed by appealing to their feelings, emotions and experiences… Consequently, Yavlinsky needs to inject more emotion to broaden his audience; Zhirinovsky needs to incorporate more logical arguments; whilst Yeltsin and Zyuganov urgently need to change their appearance and adopt a more likeable demeanour – the rest of their approach is more or less in order. Economic programmes are irrelevant; the majority of ordinary people – and they make up 80 per cent of the country’s population – react according to the laws of psychological and emotional hypnosis. Peter the Great possessed

the necessary qualities, so if I were tasked with securing an election victory for a particular leader, I could guarantee a result of 70–90 per cent within two to three weeks! Unfortunately, however, it is incompetent people who get involved in these matters, whilst hypnotists – who are professionals when it comes to influencing people – are not called upon for such tasks today. There is, admittedly, another reason for this, as one leader pointed out: 'It doesn't matter how you vote; what matters is how we count the votes.'

4. Comprehensive psychotechnique or the 'Kandyba method' – this psychotechnique simultaneously incorporates all three main groups of psychotechniques: psychological (verbal), mental (mental imagery) and emotional (ecstatic). This method is also known as 'SK-coding' when applied with pre-suggestion and according to a specific scenario.

5. Psychedelic psychotechnics – these techniques are based on the use of specific hallucinogenic drugs. The most effective is LSD-25 in a dose of 300 micrograms (administered in two doses of 100 micrograms, with the remaining 200 micrograms taken 10 minutes later).

And now a few words on collective suggestion. The question of whether collective hypnotic suggestion – that is, simultaneous suggestion affecting a large number of people – is possible remains open. Despite numerous objections, this art has been demonstrated on numerous occasions by touring hypnotists. One of the tricks in the repertoire of the famous English touring hypnotist Casson (Sa op) was as follows: everyone present presses their hands, with fingers interlaced, firmly against the top of their heads, palms facing upwards. After a demonstration of the power of hypnotic suggestion on stage, a huge number of people in the audience readily accept whatever suggestion the hypnotist offers. Thus, when he declares that many of those present will be unable to unclasp their hands, sometimes hundreds, or even more, are genuinely unable to do so until given permission by the hypnotist. There is no doubt that, under favourable conditions, collective suggestion can be highly effective. Among primitive tribes, it is easy to induce mass daydreams, illusions or visual

hallucinations. Suggestion possesses particular power as a result of the spread of ideas and emotions that are well received by the crowd, in which people are, as it were, influenced by one another.

The term ‘collective hypnotic suggestion’ is, of course, applicable only in those cases where the practitioner uses hypnotogenic methods to achieve a pathological degree of suggestibility amongst the people making up the crowd. Another, more appropriate term is usually used – ‘collective suggestion’. In this connection, it is interesting to note that in primitive societies, shamans or healers often resort to hypnotogenic techniques of collective suggestion. Monotonous muttering or rhythmic beats on a tam-tam successfully replace the more refined methods of modern hypnotists.

Perhaps it is time to explain why the BBC banned the broadcasting of hypnosis sessions on television. This was a consequence of Casson’s 1946 television appearance. Shortly after the programme began, around a third of all camera operators and engineers found themselves in a deep hypnotic trance. Two of them were sleeping so soundly that Casson was forced to strike them several times to rouse them from this state. The effectiveness of hypnotic sessions broadcast on television leaves no room for doubt as to the potential of such influence through the medium of film. Some psychotherapists record their own voices giving commands to people suffering from insomnia, with the aim of instilling a desire to sleep. The success of this method depends on the effectiveness of repeated hypnotic suggestion previously administered by the same practitioner.

From time to time, reports emerge of mentally healthy individuals who have heard voices or experienced visions warning of impending danger, predicting an illness or event, or indicating the need to take certain actions. Blender referred to these as teleological hallucinations. This is clearly an unfortunate term, as it lends a certain connotation to what should be considered from the perspective of medical psychology. A teleological hallucination manifests itself primarily as a means of serving some purpose or plan. It

requires an explanation in terms of supernatural causes, although spiritualists and many others claim the opposite.

There are many ways in which legends about teleological hallucinations arise. A significant number of them fall under a category that might be broadly titled: ‘The psychology of self-deception and a passionate desire for the extraordinary’. Undoubtedly, we know of many examples of hallucinations or dreams that are most closely correlated with subsequent events. These include prodromal hallucinations or dreams, in which an individual receives a warning of illness. However, they may already have subconsciously sensed some of its symptoms, yet for various reasons were unwilling to recognise them for what they really were, until a dream or auditory hallucination drew their attention to the present moment.

Prodromal symptoms such as severe fatigue, vague pain or itching may trigger autoscopic hallucinations, particularly in hysterical individuals, who may see themselves in a hospital ward. Subsequently, they may develop cancer or some other illness, which serves as grounds for claiming that they had a premonition of the illness in the form of a vision. Undoubtedly, they will be inclined to regard it as an occult or religious phenomenon. Psychological studies from the last century frequently mention cases of hallucinations in which a person saw a relative either seriously ill or dead. In a number of situations where the events were accurately reflected, the hallucinations were prompted by existing information about the relative’s state of health.

Hallucinations that allegedly occurred at the very moment when a distant relative or friend living elsewhere was dying aroused considerable suspicion. At the very least, there is no clear evidence for any such coincidence.

Like dreams, hallucinations can serve as a guide to how a person should act in a particular situation. It is possible that the circumstances of a case, which are undoubtedly well known to the individual, may lead to a subconscious choice of a probable sequence of events. Then comes a dream or hallucination containing the unfolding of the elements of this chain. As a result,

, the person may subsequently come to believe that they have received a warning from a higher power. In short, all reports of teleological sensory hallucinations occurring in mentally healthy people should be treated with extreme caution. However, there is no doubt that they may occur in certain types of hysteria, in the early stages of psychosis, or in the presence of a hallucinatory syndrome of any aetiology. Genuine sensory hallucinations in healthy people are extremely rare. On the other hand, illusions, daydreams, pseudo-hallucinations, and whims and caprices can easily be mistaken for hallucinations by those who strongly wish them to be so.

Descriptions of cases in which a person hears a voice warning them of imminent danger (such as a hole in the path they are walking along in the dead of night, or the proximity of an enemy or a wild animal) arouse the least suspicion. We know that danger and fear can lead to profound physiological changes in the human body. Consequently, it is entirely possible that, in some individuals, a subconscious premonition of danger may trigger auditory or visual hallucinations—that is, a means of becoming aware of impending danger. Another explanation is that a sudden realisation of danger triggers a wave of fear, followed by the development of hallucinations or pseudo-hallucinations. The actual sequence of events becomes confused when one attempts to reconstruct them in one's memory.

Subconscious reasoning is an indisputable fact. Many difficult problems have been resolved with its help. There is evidence that, in people who have experienced hysterical hallucinations, subconscious reasoning determined their form and content. One example is the voices heard by Joan of Arc, which provided an accurate assessment of events and predicted their future course, or the voice of the spirit that spoke to Socrates, who had a marked tendency towards dissociation. It is precisely this subconscious reasoning that often causes people facing long-standing and intractable difficulties—and who are desperate to resolve them—to hear voices offering them useful advice. In states bordering on psychosis, such teleological hallucinations do not

are such all rare phenomenon. The publications of the Society for Psychical Research, published in the 19th century, are literally replete with descriptions of cases of teleological hallucinations. However, a more critical approach to the issue has reduced their number to a minimum, confining them mainly to occult journals, whose editors regard Occam's razor—a principle so widely revered—with contempt. It is well known that among primitive peoples sensory hallucinations can be induced by ordinary suggestion, especially if the individual is experiencing intense emotional stress (fear or anxious anticipation).

Anticipation is the cause of most cases of optical illusion. For example, a person eagerly awaiting a bus tries to make out its number from a distance. They see that it is the No. 17 bus, i.e. exactly the one they need. However, as it draws nearer, it turns out to be bus No. 24. The person is baffled by their mistake, which is nothing other than an optical illusion—or, more precisely, its most common form.

Waiting, on the other hand, which leads to genuine visual hallucinations, is an entirely different phenomenon. The intense fear experienced by a superstitious and narrow-minded person of the past at the slightest rustle or noise gave rise to their appearance in the form of an object that might have been the cause of that noise. Intense fear triggers a series of physiological reactions that affect the nervous system and blood circulation, and are also capable of inducing changes in the brain similar to those occurring during mental disorders or delirium. Collective hallucinations have not yet been studied in sufficient depth, as they have virtually fallen out of the field of view of medical psychology. In the last century, the world's population was more gullible, superstitious and susceptible to suggestion than it is today. However, we must not forget that, when surrounded by a crowd, a person becomes more primitive. In terms of thought processes, they may even come to resemble a savage. Anyone who has ever heard the roar of a crowd at one of Hitler's rallies or observed the reaction of supporters during a rugby match will readily agree with this statement. An emotional outburst that instantly sweeps through a crowd, or the rapid spread of absurd rumours that, within a few minutes, become embellished with the most incredible details – these are

just two examples of the mutually reinforcing effect of suggestion. Such forms of suggestion are best demonstrated during moments of religious ecstasy. It is hardly surprising that accounts of collective hallucinations most often relate to churches, statues of saints or their depictions in paintings. The most common ‘miracle’ is the movement of a statue or image, to the point of it stepping down from its pedestal or stepping out of the frame of a painting. According to Rosset, there is nothing surprising in this for anyone who understands the mechanism of a phenomenon such as attention and its interconnection with the process of falling asleep and with the emergence of visions associated with that process.

Belief in miracles gives rise to evidence of their existence. The factors that induce hallucinations in an individual may have an even more potent effect on an excited and anxiously awaiting crowd, leading to mass hallucinations. There is no reason to suppose that the content of these visions would be exactly the same for any two people. However, preconceptions and conversations whilst awaiting a miracle will undoubtedly lead to a great similarity in the visions, which precludes the possibility of subsequently identifying any differences. Each individual’s imagination contributes to the form and movement of the vision, since hallucinatory sensations of all kinds are the product of the activity of their own consciousness. Reports of certain differences in the experience then disappear as the experience is harmonised during subsequent discussions and recollections.

In 1919, numerous cases of mass hallucinations were recorded in Spain. Some of these were thoroughly studied by Professor Ensainas. Almost all of them were associated with images of saints in paintings, which ‘moved’ and even
‘stepped out’ towards the viewers. Furthermore, blood appeared on some of the paintings. Ensainas and Professor Yaish, who was involved in the research, concluded that the hallucinations were fundamentally caused by the fixation and intensification of attention. Indeed, following the first reports of the miracle, crowds of curious onlookers flocked to the church, standing for hours in front of the paintings, examining them very carefully and intently. At times, someone would suddenly cry out, pointing to
‘moving eyes’ in the painting or the ‘appearance of drops of blood’.

History also records numerous examples of burning or glittering crosses appearing in the sky. Accounts from ‘eyewitnesses’ who themselves saw nothing unusual in the sky indicate that practically everyone around them was excitedly pointing at something. Exclamations of amazement rang out; some of those present fell to their knees and gave fervent thanks for this opportunity to witness a miracle.

There is no doubt that many people experience genuine hallucinations. However, it is equally indisputable that some of those present simply convince themselves that they have witnessed a miracle. Rather than acknowledging the absence of anything out of the ordinary, they are more likely to feign participation in the sacrament until they genuinely come to feel that they have seen everything with their own eyes. Wachers wrote the following on this subject: ‘Emotion is a powerful enemy of material evidence. It is the cause of confusion between what is actually seen and the memory of the event. Certain details are remembered more clearly, whilst others, as well as the connections between them, become blurred and unclear. Memory begins to helpfully reproduce the former, shifting the emphasis and giving a false colouring to what happened. Our memory can let us down under the influence of very strong emotion. The presence of a large number of people around us increases the tension. The emotion is amplified by those who share it; the excitement and the accompanying confusion grow, and a word spoken in passing gives ‘a boost to the imagination’. ‘Look, he’s floating,’ says someone in a matter-of-fact tone. Others, who see nothing, simply conjure up the desired image in their minds. Subsequently, it is impossible to convince them that, in reality, they did not witness anything supernatural. In a number of cases, collective hallucinations have precisely this origin.’

The earliest references to doppelgängers date back to the early stages of ancient Egypt’s development. In the romantic literature of the Victorian era, doppelgängers or spirits played a central role. Some appeared as guardian angels, others as evil emissaries of the devil. In these works, the hero or villain came face to face with an exact replica of themselves. This second ‘self’ was often described

as the soul or destiny, and its appearance was seen as a warning of the inevitability of fate.

Another variant of phenomena of the same order is astral projection (out-of-body experiences), which has attracted the attention of many researchers. Accounts of such experiences are very numerous. Their authors, shaken by a phenomenon that lies beyond the bounds of our understanding, tend to imbue it with a mystical flavour. They believe that, for a time, their souls left their physical bodies. During autoscopic hallucinations of this type, a person often has a vivid sensation of seeing their own body from the outside. The most common situations in which such hallucinations may be observed include the acute phase of a serious illness and moments of extreme suffering, after which the pain subsides.

Accounts often mention the sensation of leaving the body and floating above it in a state of calm detachment, or of observing the course of a surgical procedure. Moreover, in many cases, according to medical staff, the people who had this experience were unconscious.

An ordinary person confronted with accounts of doppelgängers and out-of-body experiences will undoubtedly feel a deep sense of scepticism and attempt to explain it all away as a product of an overactive imagination. Nothing could be further from the truth than such a view. Both of these phenomena, however supernatural they may seem, are based on the same principles as visual hallucinations. However, it must be acknowledged that the cause of such an unusual form of hallucination has not yet been established. For a long time, any form of hallucination was considered to be caused by the action of supernatural forces. Many physicists researching autoscopic hallucinations are particularly interested in the occult aspect of the problem. Proponents of this pseudoscience are rarely interested in hallucinations for their own sake. They are primarily concerned with a possible connection to the supernatural or paranormal. Such an approach brings to mind the reverential dread felt by our not-so-distant ancestors when witnessing manifestations of psychological anomalies.

Stripped of any hint of devilry or magic, autoscopic hallucinations can be regarded as a more prosaic phenomenon: purely physiological abnormalities caused, for the most part, by delirium or hysteria. They can manifest themselves in the most unexpected ways. Jung, for example, describes a case involving a woman prone to hysterical dissociation. She was due to undergo a minor surgical procedure to remove a splinter from her finger. She probably fell into an autohypnotic state, as 'without any transition, she suddenly found herself sitting by a stream flowing through a picturesque meadow, picking flowers. This state lasted exactly as long as the operation. Then it ceased of its own accord'. In such autoscopic hallucinations, the individual remains fully conscious and does not lose their sense of self. They simply 'see' an exact copy of themselves standing or sitting next to them. Usually, hallucinations of this type are very brief, although in some cases they may persist for a fairly long period. It should be borne in mind that assessing the time factor is a difficult task, as with certain types of visual hallucinations (for example, those arising from the use of mescaline) the sense of time disappears entirely. What feels as though it lasts an hour or more actually takes only a few minutes.

In the case of autoscopic hallucinations, characterised as out-of-body experiences and often practised by mystics and seers, self-awareness takes on a very interesting form. Plotinus referred to such states as ecstasy. Instead of the familiar form of existence, in which one's own 'self' is inseparable from the body, the individual suddenly sees an image of themselves and, at the same time, experiences the sensation that this is their true essence. Here, the hallucination and the accompanying sensory deception appear to be akin to a dream-like state, since in dreams we often see ourselves from the outside. The link between sleep and out-of-body experiences becomes, in the view of many authors, even more plausible when one recalls that the majority of cases of autoscopic hallucinations of this type occurred when, judging by outward appearances, the individual was unconscious. However,

there is probably a mistake. Most likely, the aforementioned autoscopic hallucinations occur upon regaining consciousness and emerging from an unconscious state.

There are a number of theories explaining the aetiology and specific nature of autoscopic hallucinations. However, none of them is entirely satisfactory. Apart from hysteria, another possible cause of this phenomenon may be the impact of any form of shock on the brain and nervous system. In addition to sensations arising from our perception of the world through the six senses, there are sensations whose information is transmitted to the brain via the sympathetic nervous system. Broadly speaking, these serve as an indicator of our health and a measure of our physical condition. The activity of our internal organs, muscles, endocrine glands and the nervous system is registered by our consciousness in the form of sensations of well-being, discomfort, fatigue and other vague and often indefinite feelings. It is known that these can give rise to dreams with a quite specific focus. In the same way, they can also influence the content of hallucinations.

Cases have been described in the literature where an individual has seen an image of their own internal organs. Sometimes such visions have helped a person to realise the cause of their suffering (the presence of an ulcer, adhesions or intestinal obstruction, etc.). Dr Komar provides an interesting example. He reports on a man whose hallucinations accurately reflected an inflammatory process occurring in the transverse colon. They occurred very frequently and fully mirrored all the changes taking place. The hallucinations ceased upon recovery. Naturally, such situations call for answers to the following questions:

Did the hallucinations actually occur?

Was the information manifested as hallucinations received due to the high sensitivity of the sympathetic nervous system?

Did the presence of the carer and her careless remarks influence the content of the hallucinations?

When confronted with out-of-body experiences, even the most level-headed person may perceive something mystical in them.

It is difficult to resist such a feeling when one gets the sensation that one's 'ego' is situated somewhere outside the body, at a vantage point from which one can observe one's physical form lying and moving somewhere below. At the same time, the 'ego' retains the ability to see and even hear everything from a distance, although the latter occurs somewhat less frequently.

A typical example is the case of a tank driver who was thrown from his vehicle by the blast wave after it struck a mine. Suddenly, the officer had the sensation of floating in the air, watching his own motionless and bloodied body lying below. On the one hand, this hallucination could be regarded as a vivid dream; on the other, as a moment of regaining consciousness. The sensation of floating in the air was probably a direct consequence of the blast wave, that is, an episode which the Driver was subsequently simply unable to recall. The vision of his wounded body may have been prompted by an awareness of what had happened or by the sensations arising in his body as he regained consciousness.

In certain forms of shock, dreams can become so vivid and lifelike that they acquire many of the characteristics typical of genuine hallucinations occurring whilst awake. The difference between them lies, essentially, in the intensity of the sensations. Regardless of whether they are the product of the same mechanism, their close interconnection is quite evident. Numerous cases have been described in which the protagonist of a dream or some other object persisted for several seconds after the sleeper opened their eyes, thereby becoming a genuine hallucination.

The vast majority of cases of hallucinations in which an individual feels as though they are leaving their body occur in patients with psychoses. Only a small proportion of out-of-body experiences are autoscopic hallucinations, in which the individual sees themselves from the outside. The most common type involves hallucinations in which a person feels as though they are being drawn out of their body. Having left their physical form, they soar towards the starry realms, listen to the music of the spheres, see them in colour, and converse with spirits, angels and even God Himself.

Hallucinations of the opposite nature may also occur, in which the individual plummets into hell, where they are tormented by demons and devils and where they encounter Satan. Such phenomena are not uncommon amongst hysterical patients. Similar visions were observed in his later years in Emanuel Swedenborg, a brilliant 18th-century scientist and philosopher. Most likely, they were the result of hysteria accompanied by incipient paranoia. Psychosthenics (i.e. people suffering from various psychoneuroses that do not fall under the concept of
'hysteria') often experience a sense of unreality, a loss of identity and obsessive states. Although hallucinations are still the exception among typical psychosthenics, they can often sense and see their 'alter ego'. A psychosthenic usually describes their condition as follows: 'There is a sense that what is happening is unreal: although I recognise everything around me, things seem strange and unfamiliar. Often, when I wake up or enter a room after a walk, it seems alien to me. I see my desk, my bed; I know they belong to me. Yet at the same time, I get the feeling that I am seeing all this for the first time in my life. It also seems to me that there are two people instead of just me, that I am standing there looking at myself, observing my own actions and even trying to anticipate them. But at times I become deeply bewildered, so profoundly do I feel the presence of a stranger who, in some incomprehensible way, is part of myself. Finally, I am often overcome by a state in which I experience an unpleasant sensation of something missing inside, of having lost a part of myself, of incompleteness and unfinishedness.

Based on this description, it is easy to imagine the nature of the hallucinations experienced by a psychotechnician with a sense of depersonalisation as their condition worsens. The majority of these will be of an autoscopic nature, that is, they will involve the experience of an astral projection. The feeling of depersonalisation can become so intense that the psychosthenic individual loses touch with reality. They suddenly begin to speak of the absence of a physical body. This symptom may be observed in certain types of paranoia.

Many accounts of autoscopic hallucinations are simply fabrications. Some of them are the result of delirium or dissociation. Very often, autoscopic hallucinations are associated with

critical moments during the course of an illness (such as pneumonia), when the patient seems to view themselves from the outside. If we assume that the hallucinations are real, the question arises: is it possible that the visions correspond exactly to events that actually took place at the time they were experienced? This is unlikely, although it would be wrong to deny it entirely. The actual course of events and their reflection in the hallucinations will certainly not coincide in every detail. However, delirium, disturbances of consciousness and various sensory factors may act as a link between real phenomena and the events that constitute the content of the hallucinations. Before a patient loses consciousness, they usually have, albeit a very fleeting, perception of their body's position or the circumstances that led to this state. This occurs regardless of the cause of the loss of consciousness (illness, accident or surgical intervention). During delirium, or when not all cortical centres are shut down, sound, touch or smell can serve as a source of information on the basis of which the brain is able to reconstruct what is happening in the form of hallucinations.

Nevertheless, in most cases of autoscopic hallucinations, the theory of coordination between the actual event and its reconstruction in the visions does not stand up to scrutiny. It seems far more likely that the patient's experience is the result of a hallucination arising during the process of regaining consciousness.

Severe hypothermia or overexertion can induce trance-like states of consciousness. Undoubtedly, this is the explanation for why individuals often deny having lost consciousness during such experiences. There are accounts of cases where autoscopic hallucinations have occurred in outstanding individuals possessing exceptional abilities and highly developed intellects. These may be explained by transient brain phenomena caused by a rise in temperature, exhaustion, shock or the use of drugs.

Delusions and hallucinations resulting from hysteria or sensory disturbances have undoubtedly contributed to the creation of the myth of the 'astral body'. The latter is but a drop in a vast ocean of

of superstitions and belief in the supernatural, the roots of which lie in psychological abnormalities.

Hypnagogic hallucinations are a relatively rare phenomenon. They typically occur during the stage between wakefulness and sleep. Hallucinations that occur just before falling asleep are called hypnagogic, whilst those that occur immediately upon waking are called hypnopompic. However, they are most often referred to by a single term: 'hypnagogic hallucinations'. Although this type of hallucination has its own distinctive features, it is not possible to draw a clear distinction between it and other types of hallucinations. Hypnagogic hallucinations usually occur in a state that cannot be classified as either sleep or wakefulness. During sleep, a person actively participates in what is happening. In the case of hypnagogic hallucinations, this element is absent.

The perceiver simply observes the images unfolding before their consciousness, without making any effort and whilst retaining awareness of their surroundings. This characteristic is not inherent to sleep and is often absent in other types of hallucinations. The experiencer also retains the ability to take an interest in what is happening. This phenomenon bears a resemblance to the hallucinations observed when working with a 'magic crystal'.

Hypnagogic hallucinations are most commonly observed in children. Adults experience them relatively rarely, although some claim to have encountered this phenomenon for many years or throughout their entire lives. Such hallucinations are periodic and irregular in nature. The intervals between them can be very long. It is quite possible that most people have had such hallucinations at least once in their lives. However, they may have subsequently forgotten all about it.

The visions associated with hypnagogic hallucinations are distinctive. They are often unnaturally vivid and clear. Many experiencers see scenes and objects that appear to be bathed in bright light or a glow. Images, scenes, faces and figures follow one another in rapid succession, making it impossible to examine them closely. Some experiencers see a play of bizarre and vivid arabesques. To others, the scenes appear as constantly

flickering frames, projected by a projector. Some describe views and panoramas, observed as if from the window of a rapidly travelling train. In a number of cases, the visions consist of ethereal faces that change as if in a kaleidoscope: beautiful, ordinary, and often grotesque. It is possible that it was precisely these hypnagogic hallucinations that gave rise to traditional depictions of demons, house spirits and wood spirits. Some experiencers report that, although their visions were very small in size (the size of a small photograph or a postage stamp), every detail was perfectly clear. Usually, the visions are very vividly coloured, though there are a few cases of achromatic hallucinations.

One should not assume that rapidly changing images are the only possible form of hypnagogic hallucinations. Their content can vary greatly, and an object or scene may remain stationary for several minutes. A case has been described in which the perceiver saw bricks floating in the air, one half of which was coloured gold and the other half black.

Attempts to alter the content of the visions at will were unsuccessful. They led to the visions disappearing. Evidently, the reason for this lies in the subject's transition, under deliberate volitional control, to a stage that approximates the waking state.

For most experiencers, the hallucinations occur with their eyes closed. Some people report that they continue to see them in semi-darkness or darkness even after opening their eyes. A few individuals claim that they experienced hallucinations in daylight and with their eyes open.

The psychological nature of hypnagogic hallucinations has not yet been determined. Most visions are likely attributable to forgotten memories, the workings of the mind, or pure imagination. In some cases, the experiencers recognise events or scenes from long-past years; the only explanation is as follows: hypnagogic visions are rarely linked to recent events or incidents in the experiencer's life. There is a view that the experiencer's state of health has no bearing on the occurrence of

hypnagogic hallucinations in adults. This view is highly questionable.

The author of the book puts forward two possible aetiological factors associated with hypnagogic hallucinations. The latter are most frequently observed in children of various ages who fall within the developmental period characterised by the most vivid manifestations of imagery memory. It is for this very reason that hypnagogic hallucinations rarely occur after the age of 12–14. As for adults, their visions resemble hallucinations induced by mescaline or those arising during subacute alcoholic psychosis. Thus, hypnagogic hallucinations in adults are not spontaneous manifestations of their former abilities, but a consequence of toxaemia. According to a number of reports, some individuals are able to induce hypnagogic hallucinations simply by closing their eyes and relaxing completely.

It is hardly appropriate to call this hypnagogic hallucinations; rather, the term ‘light trance’ is more fitting here, as it refers to a specific state also experienced by hysterics. In principle, anyone can be hypnotised – some more easily than others.

In the presence of certain mental disorders – such as neurosis manifesting as obsessive states – we must achieve the deepest possible trance during the very first session, even if it takes two hours or more. In such cases, we may also use intermittent hypnosis: during the session, we repeatedly wake the patient and then re-induce them into a hypnotic state.

The question always arises as to whether the patient should lie down or sit in a chair during a hypnosis session. Both are acceptable, as there are no hard and fast rules: some hypnotherapists use only one position, whilst others use both. For most patients, their body position makes no difference, but experience shows that those who are easily frightened feel more comfortable sitting. Others prefer to lie down, and many hypnotherapists also consider this position more comfortable, as it facilitates relaxation and most closely resembles the body’s position during normal sleep.

Whichever position we choose, we must always ensure that the patient feels comfortable. So, before beginning the hypnosis, we tell them to adopt the position that allows for the greatest

receptiveness, not to exert any willpower and under no circumstances to resist internally. They should also refrain from asking questions about what is happening to them, but simply accept everything as it is.

Following this preparation, we can begin the induction into hypnosis, for which we have several methods at our disposal. We shall examine the most important and tried-and-tested ones below.

1 Fixation:

In this tried-and-tested method of inducing a state of hypnosis in the patient, we ask them to fix their gaze on any object that we hold at a distance of about 25 cm from their eyes (this could be a pencil or a coin, a key or a coloured ball suspended on a string).

Whilst the patient is focusing on this object, we give them a series of suggestions in a calm, monotonous voice (which must always be concrete and vivid in nature, and repeated by us many times). First of all, we induce a sense of general relaxation, followed by increasing drowsiness, so that, once a sensation of heaviness and warmth sets in, we can finally induce a hypnotic sleep.

The time required for these suggestions depends on the patient's individual receptivity. The text itself might be something like this (naturally, there are numerous possible variations):

'I am holding an object in front of your eyes, which you are looking at. You can hear my voice clearly and distinctly. If your gaze
'loses' the object, you direct it back to the object and keep it fixed there. Relax and listen to my voice. I would like you to relax. You feel this relaxation throughout your whole body. You are relaxing more and more as you focus on the object and listen to my voice. You feel more and more relaxed. The muscles in your feet are relaxed, the muscles in your legs, arms and hands are relaxed; your whole body is relaxed.

And now you feel that you want to sleep. You are becoming more and more sleepy. Listen carefully to my voice. And now a heaviness is coming over you; your body is becoming heavy, your

Your feet, your legs, your whole body are growing heavy. A pleasant warmth envelops you, just as when you're falling asleep. Your eyelids are growing heavy; you're feeling sleepy. Your eyelids are heavy, heavy, heavy. Think of sleep, only sleep, sleep and nothing else.

Now you cannot keep your eyes open, because your eyelids are getting heavier and heavier, heavier and heavier. You want to sleep. You want to sleep more and more. Your vision is blurring, your eyes are stinging, you're crying (we only say these words when we see that your eyes have actually become moist!). Breathe deeply and slowly, deeply and slowly. With every breath, your sleep grows deeper. Your eyes are already closed. You're drifting off to sleep, sleeping, sleeping."

As a rule, repeating the final suggestion yields results, and our patient closes their eyes (after which we can place our fingers on their closed eyelids). If this does not happen, we can move on to the counting technique: we go through the individual phases of the suggestion once more, counting (slowly, of course) from one to ten during each phase.

If this does not help either, we use the following method. We move our hand up and down frequently, a few centimetres from the patient's eyes, and for about two minutes repeat the following suggestion:

'Follow my hand with your eyes, up, down, up, down, and you are sleeping, sleeping ever more deeply!'

If the patient still stubbornly keeps their eyelids open, we tell them: 'You may now close your eyes.'

At the same time, we gently lower the patient's eyelids with our fingers.

We have another way of getting 'stubborn' patients to close their eyes. Simply hold your index and middle fingers in front of their eyes and say:

'Your eyelids are getting heavier and heavier, and you want to sleep… Focus your gaze on my fingers. I'm bringing them closer and closer to your eyes, and they're closing." Of course, the patient will eventually close their eyes when our fingers are very close to them. And it is at precisely this moment that we place our fingers on their eyelids and press down gently. We tell the patient that their eyes will remain

closed until they , until we haveissue the relevant order.

2 Verbal suggestion:

First and foremost, in cases where our patient is unable to fix their gaze on an object, we use the method of simple verbal suggestion. We ask the patient to lie down on the couch (this method is an exception: it can only be carried out whilst lying down) and close their eyes. We then give them a suggestion along the following lines:

'I would like you to relax, to relax your whole body. I would like you to become aware of any tension in your muscles, in all your muscles, and then to relax. Relax your forehead, relax your facial muscles. Relax your neck muscles, the muscles in your arms, legs and your whole body.

Now stretch out your arms and legs. You feel a sense of lethargy and tiredness throughout your whole body. Now you feel the pressure of the pillow against your head. You can feel the pressure of the pillow on your neck and shoulders. You can feel the couch with your whole body. Now focus on your hips and you can feel the couch supporting your body. You are completely, completely relaxed. It feels as though your body is sinking into the couch, completely submerged in it. I would now like you to imagine a pleasant, comforting place where you can stretch out and forget all your worries and troubles – a place where you can sleep.

It could be by the sea, in the mountains, or wherever you like (most patients choose the mountains). You are breathing slowly and deeply. Stretch out your legs and arms. Your body is soft and relaxed (we take the patient's hand and 'let it go'). You are completely relaxed, completely, completely relaxed. Your body is utterly relaxed. You are lying in a mountain meadow (or in another place of your choice). It is a quiet day. The sky is blue, and the sun is shining gently.

You look up at the sky. A light little cloud catches your eye. Everything is calm and peaceful. And your soul is absolutely at peace. You breathe in the scent of pine needles and see the waters of the lake. Your soul is as calm as

surface of this lake. Relax and sleep, sleep, sleep peacefully and deeply. Sleep!”

3 The visualisation method.

This method is known in two forms and is rarely used today. Some German and Russian hypnotists use it as a fixation method, but in this case the patient does not fix their gaze on an object, but looks into the hypnotist’s eyes.

The situation is different with the second form of this method, where the ‘charming’ and ‘authoritative’ aspects of the hypnotist’s personality play the main role. This form is still used in theatres and variety shows, and in medicine in certain cases of alcoholism, drug addiction and psychopathy. With this form of hypnotic eye contact, the patient sits opposite us at a distance of approximately 30 cm. In any case, we must be taller than them; if they are taller than us, we must have them sit down whilst we remain standing. We then place our hands on their shoulders and gently rock them back and forth, keeping our gaze fixed on the bridge of their nose.

We then give them a series of suggestions.

‘Look into my eyes; your gaze is growing heavy, heavy; your arms are growing heavy. Your legs are growing heavy; your whole body is growing heavy. Your eyes are tired, but do not close them if you can still manage it. Your eyelids are as heavy as lead. You will sleep, sleep!’

Now take a break. If the patient starts to blink, continue – in a more authoritative tone – with something along the following lines:

‘Your eyelids have stopped trembling. You can no longer open them until I give you the command to do so!’

As soon as their eyes are closed again, place your hand on them and say:

‘Your eyelids feel as if they’re glued shut. You cannot open them without my command.’

If the patient was standing whilst being induced into hypnosis, they should now be carefully seated in a chair.

4 V.M. Kandyba's method:

The advantage of this method is that we involve the patient in the process of inducing a hypnotic state. We ask the patient to sit in a chair and give them the following suggestion:

'I would like you to make yourself comfortable in the armchair and relax. Now that you are seated, place both your hands on your thighs. Just like that. You will focus on your hands and realise that you are able to observe them closely.'

You need to dojust do sit in armchair and relax. You'll 'll notice that in time you relaxation, various things happen. They have always happened whenever you have relaxed, but you didn't notice them so clearly before. I will draw your attention to them. I would like for you to focus on all the sensations and impressions you are experiencing in your hands, which would this was it may be. You may feel the weight of your hand resting on your thigh, or you may feel some pressure. You may feel the fabric of your trousers against your palm, or the warmth of your palm against your thigh. I'd like you to observe your sensations. You may feel something like an itch. Whatever your sensations may be, I would like you to keep track of them. Keep looking at your hand and you will notice how still it is, how it remains in exactly the same position all the time. There are movements taking place within it, but they cannot yet be perceived. I would like you to make sure you keep looking at your hand. Your attention may wander from your hand, but it will return to it all the same, and you look at your hand and ask yourself, 'When will the movements taking place within it become visible?' At this very moment, our patient's entire attention is fixed on his hand. He is absolutely eager to find out what will happen next, and we suggest to him that his future sensations will be exactly the same as anyone else's.

Under no circumstances do we attempt to impose suggestions on the patient: if any sensation does arise, he will regard it as the product of his own experiences. Our aim, however, is to ensure that he listens to our suggestions as though they were part of his own experiences. Thus, we skilfully endeavour to bring him to a state where he associates his

sensations with the words we have spoken and is firmly convinced that the words or commands we have given will subsequently elicit sensory or motor responses.

Only if the patient offers conscious resistance does one of his fingers or his whole hand begin to tremble slightly. We immediately draw his attention to this and tell him that the movement could probably be stronger. The same, of course, applies to all our patient's other objective reactions – for example, deeper breathing or movement of their legs: the connections we 'establish' between our patient's reactions and our behaviour towards them ultimately lead to the kind of contact that allows us to fully influence their neural structures!

'It will be interesting to see which of your fingers twitches first. It could be your middle finger, index finger, ring finger, little finger or thumb. One of your fingers will twitch or move. You don't know when or on which hand. Watch closely. At first, you'll feel a slight tremor, perhaps in your right hand. Look, your thumb is twitching and moving.

At the start of the movement, you'll notice something interesting. The space between your fingers is widening very slowly; your fingers are slowly spreading apart, and you'll notice that the space between them is getting wider and wider. It's widening slowly; your fingers are spreading further and further apart, spreading, spreading, spreading, just like that."

We have now given the first effective suggestion to which the patient responds: the command to spread the fingers. If this is carried out, we continue speaking as though such a reaction might occur of its own accord and in the normal course of events:

"As your fingers spread apart, you notice that they are straightening and rising (the patient's index finger begins to rise slightly). Can you see how your index finger is rising? And your other fingers want to follow it; they, too, are slowly straightening (the fingers begin to rise).

As you lift your fingers, you feel your hand becoming lighter and lighter. This feeling of lightness becomes

more intense the higher your fingers rise, and now your whole hand is rising, as if it were a balloon soaring upwards. It rises, rises, rises into the air, into the air, into the air, rising higher and higher; your hand becomes light, very light. (Your hand begins to rise.)

As you watch your hand rising, you notice that your whole arm is rising, rising into the air, a little, just a little higher, higher, higher, even higher, even, even higher. (The arm has risen about 10 cm above the hip, and the patient notices this.)

All the while, you watch your hand and arm as they rise, and at the same time you feel just how sleepy and tired your eyes have become. As your arm continues to rise, you feel tired, relaxed and want to sleep – you really want to sleep. Your eyes are growing heavy, and you may feel the urge to close your eyelids. As your arm continues to rise, you feel increasingly relaxed; you want more and more to sleep and to feel calm and at ease as you close your eyes and drift off to sleep."

At this point, it is important to note a key guideline for our subsequent approach: if the patient responds to one of our suggestions, we must use this positive reaction to reinforce the subsequent suggestion. If, for example, they raise their hand, we suggest to them that they will fall asleep because their hand is rising:

"Your arm keeps rising, rising, rising, and for this reason you are becoming very sleepy. Your eyelids are becoming very heavy. Your breathing is becoming slow and steady. Breathe deeply – breathe in and breathe out. (The patient is holding their outstretched arm straight; they are blinking, and their breathing is deep and steady.)

As you continue to gaze at your hand and wrist, you are becoming increasingly drowsy and relaxed. You notice that your hand is changing direction. It bends and your wrist moves closer to your face – closer, closer, closer – as it rises. You are slowly but surely sinking into a deep, deep sleep, in which you are relaxing very deeply. Your hand will rise higher, higher, even higher, until it reaches your face, and you feel an ever-increasing urge to sleep, but you must not fall asleep until your hand reaches

your face. If your hand reaches your face, you will fall asleep. You will sleep deeply and soundly."

Having reached this point, we give the patient the opportunity to determine the rhythm of falling asleep for themselves: when their hand touches their face, they will fall asleep, because they believe this is their own desire. The levitation of the hand and the act of falling asleep subsequently reinforce one another. If the patient then closes their eyes, they are in a trance, the attainment of which they themselves have played a part in. Therefore, they will not later seek to dispute that they were indeed in a trance.

"Now your hand is changing direction. It is rising, rising towards your face. Your eyelids are growing heavy. You feel an ever-increasing urge to sleep, sleep, sleep. (The patient's hand moves closer to their face; their eyelids flutter.)

Your eyelids are growing heavy, very heavy, and your hand has already risen towards your face. You feel very tired and sleepy. Your eyes are closing, closing. When your hand touches your face, you will fall asleep and sleep deeply. You feel very drowsy. You are falling asleep, falling asleep, falling asleep.

You really want to sleep; you're very tired. Your eyelids feel as heavy as lead, and your hand is rising, rising straight towards your face, and when it touches your face, you'll fall asleep. (The patient's hand touches their face; their eyes close.)

Now sleep, sleep, sleep, sleep, sleep, just sleep. Whilst you sleep, you feel tired and relaxed. I would like you to concentrate on relaxation, on a state of relaxation, free from any tension. Think of nothing but sleep, deep and sound sleep."

In the methods described so far for achieving that state of trance, which is a preliminary stage of the hypnotic state, verbal suggestions served as auditory stimuli. However, there are patients who, consciously or unconsciously, feel afraid of the therapist or are unable to concentrate on the words. In such cases, success can be achieved using the metronome method.

A metronome is a device for setting a musical tempo, which emits a rhythmic ticking sound that makes it easier for the patient to concentrate. We simply suggest to them that the

longer they hear the metronome's ticking, the longer their sleep will last.

Alongside this, there are many other methods of hypnosis, with or without verbal suggestions. We can learn about these from my books on hypnosis and self-hypnosis techniques. Using the methods described above, we have guided the patient to the point where they have closed their eyes and assumed a still position. Is he hypnotised? We cannot say for certain, as there are no characteristic signs. We must therefore use appropriate suggestions to determine the depth of the trance and, if necessary, deepen it to ensure that a hypnotic state is achieved. To this end, we again have several methods at our disposal, which we shall now examine.

1. The heaviness of the hands:

As a first step in checking the depth of the trance, we give our patient a suggestion along the following lines:

'You are concentrating on your hands. They are becoming heavy, very heavy, as heavy as lead: the heaviness begins in the shoulders, moves down into the forearm, into the wrist, into the fingers, into each finger – the thumb, the index finger, the middle finger, the ring finger and the little finger. Your whole hand is becoming heavy, as if it were carrying a weight of 100 kg. Now I'm going to count to five, and as I do, your hand will become heavier and heavier: one, heavy; two, very heavy; three, even heavier, like lead; four, even heavier, much heavier; five, very, very, very heavy. You can no longer move your hand, it is so heavy."

If we notice that the suggestion of heaviness has produced a positive result, we give a control suggestion:

'Your arm is very, very heavy. You feel that it is becoming increasingly difficult to move your arm. The more you try to do so, the harder it becomes. Your arm is very heavy. You cannot move it. You try, but you cannot manage it.' Alternatively, we can give the following control suggestion:

"I'm going to count to 5. Your arm will become very, very heavy.

When I reach the number 5, you will try to lift your arm, but you won't be able to. The more effort you put in, the harder it will be for you to lift it."

If, after this suggestion, the patient is still able to move their arm, it means they are not yet in a state of hypnosis. We then tell them that their case is not unusual and that many people do not pass this test straight away. In addition, we ask them to confirm (and they usually do) that they felt a certain degree of heaviness, and we explain that they are sure to succeed on their second attempt.

If, however, the suggestions were successful, which more often the case is the case, the patient is unable to move their arm even a millimetre: any contraction of the flexor muscles is counteracted by an equal or stronger contraction of the muscles. The arm becomes rigid and expresses this muscular opposition with a slight tremor. If the patient becomes frightened and insists that they can no longer move their arm, we explain to them that this is simply a process necessary for hypnosis process – exactly as as we couldhave make the hand feel exceptionally light. After checking the weight of the hand, we give the patient a few minutes to rest and we allow them some suggestions to help him relax or fall asleep. Only then can we move on to eyelid catalepsy.

2 Eyelid catalepsy:

As with all other tests, it is important to choose the right moment to give a suggestion along these lines: 'You are completely calm and relaxed. All the muscles in your body are relaxed: the muscles of your head, neck, shoulders, arms, legs – your whole body is relaxed. Your breathing is deep, slow and steady. You feel a very strong urge to sleep. You feel a pleasant warmth; you feel good. You realise that you can hear nothing but my voice. You feel your eyelids becoming very, very heavy, like lead. It is as if your eyelids are glued shut, and when you try to open them, they remain closed until I give the command to open them. They are closed, glued shut, and the more you

try to open them, the tighter they close and stick together. Try calmly to open them – and you'll see that it's impossible."

In almost all cases, following this suggestion, the patient is unable to open their eyes. If they do manage to do so, we tell them that they were putting up some resistance, which is why the previous suggestions and the sleep did not take effect. We advise them to concentrate on sleep, but not to try to keep their eyes open or to close them voluntarily. We then apply gentle pressure to the patient's eyelids with our fingers and gently close them. At the same time, we tell them that during the next session they will enter a deeper state of relaxation, similar to sleep.

After this, we resume the sleep suggestions so that, once their effects have taken hold, we can move on to the next test (some patients who fail the eyelid catalepsy test may nevertheless fall into a very deep trance).

3 Anaesthesia:

Achieving anaesthesia is preceded by an induction of hyperaesthesia (hypersensitivity), which is easier to achieve. To do this, we give the patient the following suggestion:

'Imagine that you are walking through a large room in which there is a bath filled with hot water, giving off steam. The moment you see the bath, you raise your right hand. Your whole arm rises. Lower it again. Now approach the bath. You want to find out the temperature of the water.

You dip your right hand into the bath and feel a strong sensation of heat.

The moment you feel the heat, show me by raising your hand.

Your hand is rising; that's very good. Now I'm going to touch the back of your right hand with the tip of a needle. Your hand has become so sensitive that you feel a very sharp pain. Now I'll touch your other hand, and you won't feel any pain at all."

As soon as we touch the patient's right hand, their face contorts with pain. But if they show no increased sensitivity in either hand, we tell them that they need a bit of practice before they can feel the difference, and that we are absolutely confident of success on their next attempt. Once hyperaesthesia has been achieved, we can move on to anaesthesia. In most cases, we do not achieve complete painlessness during the first session, but we can nevertheless reduce sensory sensitivity. To this end, we give a suggestion along the following lines:

'Whilst your right hand has become very sensitive, your left hand has lost its sensitivity. If I prick it, you will not feel any real pain, as you would in your other hand. Imagine that you are wearing a thick leather glove on your hand. If you can visualise this glove, please show me by raising your hand. Your hand can feel this glove, and when I prick it with a needle, you get the impression that I am only pricking the glove. (The hand is raised.)

Now I'll let you feel the difference between the pricks, first on one hand and then on the other (we'll keep this promise). Now your left hand is becoming less and less sensitive, numb to pain. The numbness has spread throughout your whole hand, fingers and fist. You feel as though your hand is made of wood. You no longer feel any pain. Do you feel numb?"

If the patient replies that they can still feel pain, we tell them that it is considerably weaker than the pain in the other hand. And that at the next session, they will feel even less sensation in their left hand.

4 Amnesia:

After anaesthesia, we deepen the trance by inducing amnesia (a form of memory impairment characterised by gaps in recollection, which is often accompanied by a deep trance; however, a deep trance can also occur without amnesia). It differs from the hypnotic phenomena described earlier in that it can only be established after the patient has woken up.

Amnesia can occur either spontaneously or be induced by posthypnotic suggestions. To establish whether it has occurred, we begin by clarifying the circumstances that the patient has probably forgotten whilst in a trance. If, however, they remember everything but amnesia is desirable for psychotherapeutic work, we subject them to specific training aimed at encouraging them to forget certain aspects of the trance or the entire process altogether. The following method proves effective here.

Immediately before the end of the next session, we ask our patient to imagine that they have fallen asleep at home and had a dream. Shortly afterwards, we suggest to them that they should wake up and open their eyes – after which they are under the impression that they have indeed woken from a deep sleep. They clearly recall their dream, whilst their recollection of other events during the trance is vague. They may even forget some of them altogether.

If, during this session, we have only been able to induce partial amnesia in our patient, then in the next session we tell him that this is a normal phenomenon and actually aids the therapy. We add that it would be very easy to forget if he were to divert his attention from certain things, and as an example we cite the events that the patient forgot during the last trance. We inform them that today they will forget most, if not all, of the events of the session. In conclusion, we suggest to them that, before waking up, they will see a dream and will wake up as soon as they see it. We tell them that although they will remember their dream after waking up, they will forget most, if not all, of the other events.

We now have such control over our patient that we can influence them through suggestive commands. Before we give the patient a suggestive command, we must ensure that they do not suddenly wake up from the hypnotic trance. If we wish to question him, for example, for the purposes of psychoanalysis regarding his own personality, or during a regression session concerning his past lives, we give him a suggestion such as this: ‘You are completely relaxed, completely at ease. You are asleep. Although you are asleep, you can speak to me. You can answer my questions without waking up, without waking up. You speak as people do in their sleep.”

The first questions we ask should be simple – for example, their surname, occupation and so on – and should not cause any fear.

Later, during analysis, we can apply the technique of free association and encourage our patient to express the first thought that comes to mind. In hypnotic regressions, we proceed in accordance with the rules for self-hypnotic regressions.

Now, of course, we can also intervene in our patient's subcortical mechanisms of processing and regulation in order to achieve there all those effects that we ourselves induce whilst conscious or through self-suggestion: to do this, we need only give them the appropriate suggestions (which we modify depending on the desired goal).

The next phenomenon of hypnosis is that of positive sensory hallucinations. These correspond to the self-suggestions we induce through our own imagination and are primarily evoked by those hypnotists who hypnotise volunteers on stage to amaze and entertain the audience: they suggest to these people that, for example, they are terribly hot (whereupon they begin to take off their clothes), or that they are a chicken (the hypnotised person begins to imitate the movements and voice of a chicken, more or less successfully).

Such stage 'magic' is not in our interests, but positive sensory hallucinations can be successfully induced for the purpose of relaxation:

'Now imagine that you and I are leaving this room. We are now in a spring meadow dotted with flowers. The weather is marvellous; the sun is shining from a cloudless sky, the birds are singing, and a stream is babbling in the distance.

I want you to visualise this scene as vividly as possible and raise your hand if you see what I am about to describe.

In front of us stands a tall birch tree with light-green leaves. Look at the birch tree – can you see it? (The patient raises their hand.) You are looking closely at the birch tree. A bird is sitting on one of the branches. If you can see it, raise your hand. The bird begins to sing. Can you hear it? If you can hear it, show me by raising your hand."

In a heterohypnotic state, just as in a self-hypnotic state, the embedding of posthypnotic commands is possible, and it is particularly appropriate for the following reasons:

– through post-hypnotic suggestion, we can ensure that the effects of these suggestions extend beyond the hypnotic session (which is important for all suggestions aimed at stopping manic behaviour, treating organic damage and illnesses, or achieving mental stabilisation; moreover,

– by reinforcing a key suggestion, we can minimise the time required for the patient to enter a hypnotic trance.

The two most easily achieved posthypnotic suggestions are posthypnotic sleep and posthypnotic eyelid twitching. Both methods can serve as tests of how responsive our patient is.

To induce post-hypnotic sleep, we suggest to our patient that the following night they will have a dream which they will remember, so that they can tell us about it at the next session.

To induce post-hypnotic eyelid tremor, we tell the patient that we will wake them up by slowly counting from 1 to 5. On the count of 5, they must open their eyes and look at us. At that moment, they should notice that their eyelids are trembling, a sensation they cannot stop no matter how hard they try. In addition, we tell them that we will then ask them to close their eyes. We will count from 1 to 3, and on the count of 3 they must open their eyes and notice that their eyelids are no longer twitching.

Before waking our patient, we give him a post-hypnotic key suggestion: we tell him that at the start of the next session we will count to a certain number, after which he will instantly slip into the same – or an even deeper – state of trance in which he currently finds himself (instead of numbers, any other key stimulus may be chosen, such as the sound of a bell, a flashing light or a key word).

The awakening itself should take place gradually. It is always preceded by suggestions of well-being and tranquillity (as we already know from our self-suggestion practice).

We might say something like this:

‘I am going to wake you up now. Gradually, your trance state is easing; I will count down from 5 to 1 (that is, in reverse order to the beginning). When you wake up, you will feel healthy and rested, and you will not experience any unpleasant sensations. You will feel as though you have had a long, restful sleep.’

We then repeat this suggestion and count: ‘5, 4, 3, 2, 1’.

Some patients, upon waking, may experience a feeling of heaviness in their limbs or suffer from nausea. If these symptoms do not subside on their own, such patients need to be hypnotised again so that a helpful suggestion can be given.

Occasionally—though very rarely—we encounter patients who do not wish to wake up: they either remain in a trance state or slip into a deep physiological sleep. The reasons for this may vary: some feel such satisfaction in the trance that they wish to linger there; others, through a ‘slipping away’ mechanism, fall asleep even before entering the trance.

If these patients do not comply with our insistent (but not threatening!) instructions, we leave them to their own devices; after a few hours, they will wake up of their own accord, driven by a physiological need.

If the patient has woken up, we talk to them about the nature of their trance experience (thereby gaining information about the depth of the trance). We may allow the patient to speak freely or ask them targeted questions.

Often, the patient claims that they did not sleep at all. Undoubtedly, in this case, there was no complete amnesia. We then explain that hypnotic sleep and natural sleep are not the same (as we have already told them), and that during hypnotic sleep, one can hear everything the hypnotist says. We add that it is only in trance states that the hypnotised person may forget what was said during the session. Under no circumstances should we fail to point out that the therapeutic effect does not depend on the depth of the trance.

Patients often say that they were unable to carry out all the suggestions. To this we reply that they will manage better next time.

Some patients claim that, although they experienced some of the induced phenomena, they never once lost control of themselves: if they had wanted to, they could easily have resisted our suggestions. We reply that we have no intention of depriving them of self-control during hypnosis. On the contrary, we were trying to enhance their self-control, and they demonstrated this very enhancement by cooperating voluntarily with us.

In conclusion, we ask the patient (particularly if they are educated and capable of analysis) to give us a detailed description of what they experienced whilst in a trance. This is the best way for us to determine how they perceived what was happening. The phrases they use in doing so (such as: ‘I was sinking, I was descending, I was floating’) can be adopted for use in subsequent sessions.

LETHARGIC SLEEP (APPARENT DEATH)

Now, continues P.I. Bul, let us consider yet another rare and interesting pathological condition, which has also only recently been explained by science. One story, recounted by I.P. Pavlov, made the rounds of many journals: a certain Kachalkin, having ‘fallen asleep’ in 1898, ‘slept through’ more than twenty years! The second patient, whom the scientist also observed at the same psychiatric clinic in Udelnaya, was a girl who ‘fell asleep’ at the age of four and
‘woke up’ as a young woman. What sort of strange sleep was this?

Letargic sleep is not a disease in its own right; it occurs in a person following severe, debilitating neuropsychiatric disorders. In such a patient, the heartbeat is extremely weak. Their breathing is so shallow that even a mirror held up to the mouth of a lethargic sleeper does not mist over. The patient’s body feels cold to the touch, yet their temperature is still higher than that of the surrounding environment. Reflexes have faded; there are no signs of life, yet, on the other hand, there are no signs of death either. The person seems to be suspended between life and death. In days gone by, all this gave rise to a host of superstitious and mystical interpretations. Imagine what a staggering impression, what terror was caused by instances of a lethargic patient suddenly awakening from their sickly slumber. Suppose, for example, that
the ‘deceased’ to the cemetery, and he suddenly rises from the coffin. Panic seizes those present; with cries of horror, people scatter in all directions. A tragicomic story took place in Spain in the last century. During the New Year’s celebrations, a tipsy dignitary suddenly felt unwell and collapsed onto the floor. When he was lifted up and laid on the sofa, he had no pulse or breath; he was cold to the touch and was pronounced dead. Even before the funeral, the ‘heartbroken’ relatives had managed to fall out over the inheritance, and at the wake a new shock awaited them: the deceased suddenly came back to life and rose from the coffin. It is likely that in days gone by there were also tragic cases of premature burial due to the limitations of medical science.

So, is a person asleep or dead? The question arises: does he feel anything whilst in this strange sleep? The patient Kachalkin, after

awakening from his lethargic sleep, told I.P. Pavlov that he understood a great deal, but could not move a hand or a foot; he could not even move his tongue to utter a word, nor could he lift his eyelids to open his eyes. He felt an overwhelming heaviness in the muscles of his entire body, so much so that it was difficult to breathe. All the motor centres in his brain were completely inhibited, whilst the areas of the cerebral cortex responsible for sensation and hearing were in a state of very slight excitation. The second patient, upon 'waking up', immediately asked about her toys, as if she had woken up the next morning after a normal night's sleep. The eighteen-year-old girl took an interest in dolls, just like a small child. This observation shows that the development of the brain and psyche occurs alongside the growth of the entire body. In this case, the brain, which was in a state of profound inhibition, did not develop at all, whilst physical development (height and body weight) nevertheless continued. Of course, this was only possible because the patients were admitted to a well-equipped clinic, where they were monitored, fed through a tube (a rubber hose) with nutritional formulas, kept warm, bathed, and their personal hygiene was maintained. If patients in a lethargic sleep were not fed artificially, they would undoubtedly die of starvation.

So what happens to the brain of a person who has fallen into a state of lethargic sleep? For a long time, scientists were unable to reach a consensus on this issue. It is only in the last decade that a clear understanding of the mechanism behind this phenomenon has finally emerged.

Scientists have established that, in certain neuropsychiatric disorders (schizophrenia, etc.), the inhibitory process can gain a pathological dominance over the excitatory process, and then, having spread throughout the cerebral cortex, it begins to descend into the lower regions of the brain, in particular the medulla oblongata, where, as is well known, the higher centres for respiration, cardiac activity, thermoregulation and other vital functions—which operate independently of our consciousness—are localised.

Lethargic sleep is caused, chiefly, by extreme weakness and utter exhaustion of the brain's nerve cells, which fall into a state of protective 'defensive' inhibition at the slightest stimulation. Under normal

physiological conditions, nerve cells are capable of functioning for a long time whilst exposed to various environmental stimuli, only gradually depleting their
'irritable substance' and gradually entering a state of inhibition. In cases of lethargy, the brain's nerve cells are severely depleted by preceding nervous disorders and remain chronically in a state of 'stagnant inhibition'. The Pavlovian school termed this inhibition 'protective', emphasising that the inhibitory process, by switching off nerve cells at the right time, prevents their further exhaustion, which could lead to their death.

In humans, lethargic sleep is a rare pathological condition. In animals, however – such as marmots, bears and certain reptiles – a state closely resembling it is normal and physiological, playing a protective role (safeguarding these species from death during hibernation or summer drought). During hibernation, animals experience a sharp reduction in metabolic processes and their need for nutrients and water, enabling them to endure this difficult period with ease. It is interesting to note that some people, through self-hypnosis and special training, are able to artificially induce a state in themselves that similar to lethargic sleep. Similar experiments are carried out onthemselves by fakirs and yogis India frommystical and religious motives, to demonstrate the power of the 'spirit' over the body. Yoga is sealed with wax the nostrils and tie mouth, wrap him in canvas and place him in a coffin, which is lowered into a sort of 'grave' and buried. After a long period (from one to six weeks), the pit is dug up, the yogi's body is removed, the plugs are taken out of his nose, and, in full view of those present, the sleeping yogi begins to turn pink, a normal pulse returns, he takes his first deep breath and … 'comes back to life'. Before entering a state of self-hypnosis, the yogi undergoes extensive preparation: he fasts for ten days, purifies his body in variousmethods (washing out the stomach, administering enemas), performs breathing exercises and
only then falls into a state close to lethargy.

There is nothing mysterious about these experiments. To control one's heart rate, for example, one does not even need to be a yogi. A woman was being treated at a clinic in Leningrad who was able to

to alter her heart rate at will. An actress by profession, and a very nervous and hysterical woman, she was able, by imagining herself in a particular situation, to induce a specific emotional state, which in turn had an immediate effect on her heart rate. The experiment was conducted as follows: sensors from the recording equipment were attached to the patient's body, after which she was asked to 'induce' a rapid pulse. Soon, the recording tape showed an increase in heart rate from 60 to 100–200 beats per minute. The subject was then asked to induce the greatest possible reduction in her pulse. Shortly afterwards, the recording showed the pulse slowing to 50 beats per minute. When the patient was put into a hypnotic state, it was possible to induce changes not only in her pulse, but also in her breathing, perspiration and other vital signs. When asked how she managed to alter her heart rate, she explained. She explained that, in order to speed up her heart rate, she would visualise a misfortune that had befallen her. She would picture in her mind's eye how she would rush up to the fifth floor, open the door to her flat and witness something tragic. On another occasion, she would picture herself on holiday by the sea, lying calmly and serenely on the shore by the water. It is well known to physiologists that one's emotional state can affect the functioning of the heart, lungs, sweat glands, bladder and even the composition of the blood. Thus, the phenomena of lethargic sleep cease to be a mystery.

In ancient times,' says P.I. Bul, 'dreams were attributed great prophetic significance. The vividness of dream imagery, coupled with a lack of understanding of their mechanism and causes, led people to interpret dreams in mystical terms. However, even in our own time, despite scientific discoveries, there are still many people who believe in the possibility of predicting the future through dreams. Belief in prophetic dreams continues to exist even in our atomic and space age.

Modern science has unravelled the causes, nature and mechanism behind dreams. Moreover, we can artificially induce them in laboratory conditions, either at the subject's request or at the experimenter's discretion. The experiment was set up as follows. Sensors were attached to the sleeping person's body, connected to devices that recorded 'traces' onto magnetic tape. When

the instruments detected that the subject was falling asleep, a stimulus was applied to the subject's body and sensory organs. For example, in one instance, water was dripped from a pipette onto the mucous membrane of the sleeper's lips. He immediately began to toss and turn, then rolled onto his side and started making swimming movements with his arms. He was woken up straight away and reported that he had dreamt he had fallen into water and was swimming to safety. Another subject had a test tube containing a pungent substance held up to his nose whilst he was asleep. The sleeper became agitated in his sleep; the wings of his nose began to flare (it was clear that, in his sleep,
'sniffing'). Upon waking, he recounted that he had dreamt of Eastern countries, Cairo, and a perfume shop (shortly before this, the subject had been on a business trip to Egypt). In the next experiment, a fan was placed next to the subject, directing a stream of cold air onto his face and side. The man began to shiver from the cold in his sleep and woke up of his own accord, saying that he had dreamt of
'a polar dream'.

It was thus established that external stimuli (olfactory, thermal, auditory) induce corresponding dreams. It has been proven that stimuli from within the body (the heart, stomach, bladder, etc.) can also induce corresponding dreams. For example, a full stomach can trigger dreams associated with a feeling of suffocation. In the old days, such dreams gave rise to the belief among superstitious people that 'the house spirit was choking them'.

So what is the source material for our dreams? The answer is clear: our life experience. Everything we have ever seen, even in films, and everything we have ever been told, does not pass without a trace, but is stored in the 'storehouses' of our long-term memory in the form of
'engrams' (traces of memories). And I.M. Sechenov was right when he wrote: 'Dreams are an unprecedented combination of past impressions!' This is why we can confidently conclude that prophetic dreams cannot exist, for in our dreams we see, hear, feel and experience not what lies ahead of us, but what we have already experienced, seen and heard at some point. People who have been blind from birth never have visual dreams.

They may experience tactile, auditory and olfactory
'dream-like' sensations. Thus, the basis of our most

fantastical dreams is the life experience we possess.

Scientific research shows that our sleep is not uniform. There is rapid eye movement (REM) sleep and non-REM sleep, as established by electroencephalograms. Dreams are only possible during the rapid eye movement (REM) phase. When a person is asleep, the areas of the cerebral cortex that control memory, speech, abstract thinking and other higher mental functions are inhibited, which explains the fantastical and unreal nature of many dreams. Under certain exceptional circumstances, 'creative' dreams are also possible. For example, the renowned chemist Kekulé discovered the structural formula of benzene whilst asleep. The composer Tartini composed a piece of music,
which he had 'heard' in a dream.

Many similar cases are described in the scientific literature. Thus, dreams have lost their former air of mystery.

There are known cases in medical practice where a dream seemed to 'foretell' an illness. For example, one patient had the same dream for several nights running: he was swallowing various objects. He consulted an ENT specialist, who discovered a benign tumour in his throat. Another patient dreamt that he had been bitten by a snake on the right side of his chest. A few days later, an ulcer appeared in that spot which took a long time to heal. One might think that these dreams are 'prophetic' ('a dream that comes true'). However, from a scientific perspective, it becomes clear that the illness arose first, followed by the dream, and not the other way round. Signals indicating a problem in the body were sent from the affected area to the sleeping brain, and these signals gave rise to the dream.

People sometimes ask: 'Why did I dream that I was flying like a bird? I've never flown in an aeroplane or a glider; I have no experience of flying.' This can be explained as follows. It is likely that, as a child, the person used to swing on a swing, ride a rollercoaster or fall from a small height, so the experience and sensation of flying are familiar to them. The circumstances under which they received the stimuli for their dream are also known. If a person sleeps with a blanket pulled over their head and then, due to a lack of air, throws the blanket off their face, a rush of fresh air will hit their face and trigger such a dream. In another instance, a person dreamt that they had been thrown into an abyss and were flying into the void.

After all, the person has never actually fallen into an abyss, so where do this impression and sensation come from? The sensation of flying is familiar to people from childhood, but here are the reasons for such a dream: if a person sleeps with their legs bent and suddenly, instinctively, straightens them, or if someone else does so by pulling on their legs, it is at that very moment that the sensation of jumping from a height or falling into an abyss arises. A friend of mine once told me about a dream he'd had and asked how something so fantastical and absurd could have come about: 'I dreamt of a person of small stature, with eyes bulging like those of a Chinese dragon, and the face of a female colleague of mine.' We began to analyse this dream and discovered the following. Two weeks ago, my acquaintance was walking past a circus and saw a group of dwarfs coming out of it (that was the first impression), and the other day he visited an antique shop and saw a large vase there depicting a dragon with enormous, bulging eyes that struck him (that was the second impression). As for his colleague's face, he sees it every day. In his dream, these three images merged into one, resulting in the dream that had so shaken him.

In our dreams, we often see what we are striving for or what we passionately desire. A child sees a mountain of sweets in a shop window, asks his mother to buy them, but is refused. Instead, at night he dreams that he is sitting in the shop window eating the sweets. A young man courts a girl and asks her to marry him, but she turns him down. And so, in his dream, he sees himself, having won his beloved's consent, walking with her to the registry office.

If he continues to court her persistently, he may eventually win her consent in real life, and it then occurs to him that his dream was 'prophetic'. Literature describes how the famous chemist D. Mendeleev struggled for a long time to complete the periodic table of elements. One evening, he sat for a long time trying to solve this problem and, exhausted, fell asleep. And so, in his dream, he saw the solution, woke up and actually found the correct answer. This is how science answers the question of what a dream is and whether it can be prophetic.

SOMNAMBULISM (SLEEPWALKING)

Hypnotherapist P.I. Bul describes lunatism as follows: ‘This rare condition is characterised by the fact that a person, obeying a pathological impulse, may get out of bed at night and begin to move about and walk. Such a patient is not aware of their actions. They may automatically get dressed or undressed, open a window or door, and go out into the courtyard, onto the street or into the garden. Sometimes, a sleepwalker climbs the stairs to the loft, goes out onto the roof of the house and takes dangerous walks along the edge of the roof, the eaves or the balcony. The mysterious Latin term ‘somnambulism’ corresponds to a more apt and understandable Russian word – ‘sno-khodenie’. Walking in one’s sleep. Who hasn’t heard fantastical tales about sleepwalkers?

Here is what the renowned scientist I.I. Mechnikov writes about this in *Essays on Optimism*: ‘In one hospital, a 24-year-old hysterical young woman, who turned out to be a somnambulist, was taken on as a nurse. One night, the doctor on duty witnessed the following scene. The young woman got out of bed and went up to the attic floor, where the dormitory in which she had previously slept was located. Reaching the top landing of the staircase, she opened a window leading onto the roof, climbed out of the window, walked along the edge of the roof in full view of another nurse, who watched her with horror, climbed back in through another window and descended the stairs. ‘At that very moment,’ says the doctor on duty, ‘we see her: she walks silently, her movements are automatic, her arms hang by her sides as her torso leans slightly forward; she holds her head upright and motionless; her hair is loose, her eyes wide open. She looks exactly like a fantastical apparition.’

This strange phenomenon has been known to people for millennia, but science has only managed to explain it relatively recently. And it is no wonder that sleepwalking has been a source of all manner of superstitions and legends. Indeed: if the figure of a sleepwalker seemed fantastical to a biologist, what a shock our superstitious ancestors must have experienced upon encountering such a phenomenon! Just imagine: stepping out into the courtyard at night, a person with a mystical disposition

suddenly sees a figure moving along the stone wall of an abandoned house, with outstretched arms and eyes wide open yet seemingly unseeing. The figure of the sleepwalker seems to glide along the wall,
'hovering' in the air before vanishing. What is it? A ghost, a spectre? In reality, it is yet another 'stroll' by a sick person in the throes of sleepwalking.

Usually, the actions of sleepwalkers are not particularly sensible, but there are exceptions to this rule. It sometimes happens that, during the night when everyone else is asleep, some sleepwalkers carry out household chores: sweeping the floors, washing up, kneading dough, and so on. In the morning, they remember nothing of their behaviour during the night. And so the folk belief in a 'good spirit' – the house spirit – arose. In past centuries (and, sadly, even today), sleepwalking was explained as the result of supernatural forces or the influence of moonlight. It is not difficult to prove that the moon has nothing to do with it. Sleepwalkers go about their night-time wanderings even on dark, moonless nights, although they are more often spotted on bright moonlit nights.

Nor is it at all necessary for a sleepwalker to climb upwards onto a roof. They might just as easily head downwards, into a ravine or down into a cellar. It is more difficult to explain something else: the agility and strength with which they undertake their dizzying wanderings.

According to I.I. Mechnikov, 'cases of this kind show that during natural somnambulism (sleepwalking), a person acquires qualities which they did not possess in their normal state, and that they become strong, agile and skilled at gymnastics, just like their hominid ancestors… Humans have inherited from their ancestors a multitude of brain mechanisms, the activity of which was suppressed by later-developed inhibitory processes. In a state of somnambulism, these most ancient mechanisms are de-inhibited because the later-acquired parts of the cerebral cortex, which are unique to humans, are switched off." This hypothesis by I.I. Mechnikov is supported by I.P. Pavlov's views on the nature of dreams. He asserted that, as a result of the inhibition of the higher, genetically most recent areas of the cerebral cortex during ordinary sleep, a more primitive type of thinking is disinhibited. In the somnambulistic state, even

even more ancient motor reflexes, which one might think had already been lost by modern humans. It is no coincidence that one of the doctors observing a sleepwalker noted in him mannerisms characteristic of a climbing monkey: thumbs splayed outwards, feet turned inwards.

Thus, as scientists assert, somnambulism is a form of 'partial' sleep, in which inhibition affects the area of conscious activity, whilst leaving the motor cortical and subcortical structures (centres) uninhibited. We encounter instances of such partial disinhibition of specific motor areas of the cerebral cortex during sleep in hypnosis, and not infrequently in everyday life as well. For example, a person might jump up and speak in their sleep. This is possible because the motor centre for speech is disinhibited, whilst the rest of the cortex remains in a state of pronounced inhibition. Another example: a cavalryman sleeps whilst sitting in the saddle, but not all his centres are in a state of inhibition. Those centres responsible for the sense of balance remain in a state of excitation, 'maintaining' the sleeper's upright position.

The most extensive areas of the brain (the motor analyser) are in a state of local excitation during hypnotic sleep, when a hypnotised person is able to move quite freely whilst in a sleep-like state, which has led scientists to describe hypnosis as 'artificial somnambulism'. In sleepwalking, a person's motor areas are almost completely disinhibited during sleep, enabling the sleepwalker to perform more complex automatic movements that would be unexpected to an untrained observer, but which are by no means supernatural.

Sleepwalking is a rather rare condition, and so a doctor who encounters it in their practice tends to remember such cases for a long time. Once, the father of a young man came to see me. According to him, he had begun to notice 'strange behaviour': at night, the boy would sometimes get out of bed and walk around the room. On occasion, the half-dressed boy would leave the flat and go out onto the street, and on one occasion he had headed for the loft, but, fortunately, the door to it was locked. The father was familiar with the symptoms of sleepwalking and suspected that this was the

condition. It was decided to carry out treatment using hypnosis whilst he slept at night. At the appointed time, I arrived at the patient's flat. The young man was fast asleep. Placing my hand on his head, I used appropriate suggestions to transform his ordinary sleep into a hypnotic state. Without waking up, the young man began to answer questions. He was asked to re-enact the events that had occurred during his most recent episode of sleepwalking. In a drowsy state, the young man got out of bed, walked around the room, went over to the bookshelf, rummaged through it, took out one of the books, and made his way back to bed. His father confirmed that the re-enacted episode of sleepwalking corresponded exactly to the previous one. On this occasion, the young man performed all these actions with his eyes closed. It was suggested to the young man that such sleepwalking would not recur in future. And, indeed, over the course of two years of observation, there were no further episodes of sleepwalking. Thus, sleepwalking can be treated with hypnosis. It is interesting to note that the behaviour of a sleepwalker has much in common with that of a person under hypnosis. The fact is that during hypnosis, just as in sleepwalking, the areas of the cerebral cortex that 'govern' critical, conscious perception of the surrounding reality are switched off (inhibited) in the sleeper. The same, one must assume, occurs during natural sleep, when various dreams occur. Thus, the 'mystery' surrounding the phenomena of sleepwalking disappears."

ON CRIMINAL SUGGESTIONS

The question of how a hypnotist relates to various criminal suggestions is of particular interest to lawyers. This question has repeatedly been the subject of experimental research by many scholars, particularly L'Égoy, a professor of criminal law at Nancy.

A number of observations show that it is sometimes possible to suggest a particular criminal act to a person under hypnosis. For example, L'Éjoua once suggested to a subject under hypnosis: 'You owe me 500 francs; please sign me a promissory note for this amount.' The subject disputes this fact. Liegeois says: 'Your memory has failed you; let me refresh your memory: in this very room, three weeks ago, you asked me for this money, and I handed you the sum here and now in 20-franc coins.' The subject hesitates, strains his memory, then, as if recalling something, signs the promissory note. M. Turet conducted the following experiment in Charcot's laboratory in the presence of doctors: he suggested to Subject V. that she should poison a certain Mr O. The subject initially resisted doing so, arguing that Mr O. had done her no harm, but when the experimenter suggested that this gentleman was a bone of contention between her and a close acquaintance of hers, she agreed. The experimenter then took a glass, poured some beer into it, added (a simulated) poison, and told her that upon waking she must persuade Mr O. to drink the mixture. Ms V. was then awakened. A few minutes later, she approached Mr O. in a casual manner and said: 'My goodness, it's so hot in here; aren't we all parched? I'm dying of thirst. Mrs L., do you have any beer? Could you lend us a bottle? Mr O. insists that he isn't hot and that he doesn't want a drink. That's impossible in this heat,' she said. 'Surely you won't refuse to have a beer with me? Oh, but I've forgotten: Mrs L. has just offered me some beer; here it is – a full glass (she takes the glass containing the supposed poison). Please, take it from my hands and drink it. "You're clearly afraid there's something harmful in the glass; look, I'll have a sip myself" (she touches her lips to the glass as if drinking, but in fact doesn't drink a single drop). O. takes the glass and drinks

slowly; having drunk it, he closes his eyes and collapses onto the floor; he is carried out into another room. ‘What a tragedy,’ exclaim those present. ‘He was still so young and now he’s dead.’ ‘Was there perhaps a poisonous substance in the beer?’ says one of them. ‘What do you think, V.?’ ‘I don’t think anything,’ objects V. The supposed investigator steps forward, questions everyone and records their statements. At the end, he turns to V.: ‘You are, of course, not involved in this tragedy, but do you suspect anyone? Was the beer poisoned?’ – “I can assure you,” replies V., “that this could not have been the case; the proof of this is that I myself drank from his glass and, as you can see, remain unharmed.”

Here is another case. L’Éjoua gave a certain lady a white powder, passing it off as arsenic, and instructed her to dissolve it in water and serve it to a specified person at tomorrow’s ball; if that person asked what was in the glass, she was to say it was sugar water. The hypnotised woman carried out the instructions exactly as suggested and, when asked what was in the glass, said excitedly: ‘Sugar water, drink it quickly.’

Other crimes were suggested in exactly the same way. On one occasion, a subject was suggested to steal a handkerchief from his neighbour. Upon waking, he pretended to be drunk, staggered over to the specified person and, as if accidentally bumping into him, pulled the handkerchief out of his pocket. In another similar case, the hypnotised subject approached the designated person and asked, ‘What’s that in your hand?’, and whilst the other person looked down at his hand in surprise, his watch disappeared from his waistcoat.

There are numerous accounts of cases similar to those described. Analysis of these cases revealed that not all experimental offenders are equally compliant. Some commit the offence as if automatically, without realising what is happening; others, on the contrary, fully internalise the suggested thought and try, in one way or another, to justify or rationalise their actions; whilst a third group, finally, show extraordinary resistance and do not carry out the suggestions. It is not uncommon for a hypnotised subject, who obediently carries out all manner of innocent, amusing and absurd actions, to suddenly resist desperately when asked to perform a serious act – such as committing theft, slapping someone, and so on; when carrying out suggestions of this kind, there is often a very intense struggle between the suggestion and the subject’s personal character traits, as well as their moral and aesthetic standards, whether inherited or acquired.

Despite the experiments carried out, the question of whether criminal suggestions can be implanted in a hypnotised subject cannot yet be considered definitively resolved. Scholars' opinions on this matter differ. There is no doubt that, in a laboratory setting, suggestion can be used to compel a subject to commit any number of imaginary crimes. But whether criminal acts can actually be suggested is another matter. All these laboratory experiments prove nothing yet, because the hypnotised subject still retains a certain residue of consciousness—a residue that tells them the whole thing is a joke. Consciousness under hypnosis is not a blank page on which one can write anything one likes. As can be concluded from a series of experiments, the subject's individuality and their ability to instinctively recognise the gravity of their actions are not entirely paralysed: it is always easier for them to commit a crime with a wooden knife than with a real one, because they almost always retain a dim awareness of the true state of affairs.

In real life, criminal suggestion, if it succeeds at all, does so exclusively in individuals lacking a sense of morality, as well as in psychopaths, whose will is so weakened that they are unable to freely resist external influences. A mentally healthy person with well-developed moral principles cannot become the victim of criminal suggestion, even if they are successfully induced into a trance-like state. A mentally healthy person possesses the ability, to a certain extent, to suppress the stimuli affecting them, to resist them, or to choose between them. In this regard, one cannot but agree with the entirely correct observation that one can only suggest to a person what they desire, whether openly, covertly, or unconsciously.

But if a mentally healthy person with a well-developed sense of moral duty cannot be persuaded to commit a crime as such, might they not be persuaded indirectly—that is, by ordering, for example, a hypnotised person to hand a well-known individual a glass of liquid in which poison has been dissolved without the subject's knowledge? Yes, this sort of suggestion can be carried out much more easily… But here the issue is no longer one of altering the hypnotised person's personality, nor of inducing them to commit acts contrary to their nature, but rather a specific kind of deception.

It is, of course, possible to deceive a person without hypnosis; it is also possible, apart from hypnosis and through the agency of another person, to force a person to drink a glass of poison. Cases of this sort of indirect suggestion, although they have been described, cannot, in essence, be common, since a criminal who has resolved to commit a crime is unlikely to use another person for this purpose. This is disadvantageous to him in every respect: firstly, the traces of this sort of crime are much harder to conceal; and secondly, there is no guarantee that the suggested actions will not reach the consciousness of the hypnotised person and thus find their first accuser within them.

Be that as it may, society generally pays far too much attention to such ‘suggested’ crimes, attaches far too much importance to them, and often attempts to explain every inexplicable incident by attributing it to the influence of suggestion from a known or unknown third party. The press often contributes to this, exaggerating the facts and seeking to pique the reader’s curiosity.

The same is certainly true of the issue of crimes committed against a person under hypnosis. There is no doubt that such crimes can occur: in criminal practice, there are reports of theft, bodily harm and, in particular, the rape of people under hypnosis. However, crimes of this sort are, after all, rarely committed, as experimenters are well aware that amnesia offers no guarantee whatsoever that, one fine day, the hypnotised person might not suddenly recall what they experienced during a previous hypnotic session.

So, to summarise the above, it can be safely stated that, from the perspective of modern hypnology, a crime under hypnosis can be suggested and carried out, but not on just anyone; only on someone who enters a deep trance quickly and is already motivated. And since any crime can be ‘explained’, moral and ethical taboos can easily be removed by a specialist, and, in principle, any hypnotisable person may, under the influence of hypnosis – and all the more so under emotional hypnosis – commit the most heinous crime, in the truest sense of the word: a crime of madness.

PSYCHOSURGERY

My father began performing psychosurgical operations in 1964, and subsequently passed on his personal experience to me and to many of his students. As my father has trained over 100,000 psychosurgeons (on courses in alternative medicine) both at home and abroad over the years, I have decided to publish the secrets of our psychosurgical technique, since no one now disputes our authorship and priority in this field.

Although in the early 1970s there was a heated dispute between my father and the Filipinos over priority and authorship in the development of the psychosurgical method, by the mid-1970s both methods had become established worldwide as two fundamentally different approaches. The Filipino method was termed 'psi-surgery' and was based on the concept of a mystical religious ability possessed by certain individuals to perform 'psi-operations' involving incisions, actual dissection of tissues and actual 'psysurgical' treatment using the hands of a human –
the 'psychosurgeon'.

We have termed this method 'mystical', whilst my father's method has been named 'scientific psychosurgery' and is based on the trance-induced reserve capacities of the human brain to dissolve any tissues of one's own body or to perform any healing corrections on them. Whilst the Filipino method is characterised by many instances of a lack of therapeutic effect and even outright quackery, our method yields a 100 per cent therapeutic and healing result to one degree or another.

At present, our method no longer competes with the Filipinos' due to its incomparable effectiveness. We and our students perform such complex operations with our hands that the Filipinos could never have imagined, especially since none of the genuine Filipino psychosurgeons understands what they are doing or how they are doing it, as they themselves are in a deep trance (unless they are charlatans) and, due to the effect of post-trance amnesia, remember nothing of the psi-operation that has taken place and cannot explain or clarify anything, apart from their faith in God and the fact that they possess this 'divine' gift.

We shall begin our account of the art of performing open psi-operations with the Filipino method, and then move on to the Russian method.

So, the Filipino method consists of the art of psi-surgeons performing psi-operations with their bare hands, without any instruments, medicines or antiseptics. In doing so: 1) the skin tissue must be incised or spread apart by means of
'divine cosmic psi-energy'; 2) there must be a complete or almost complete absence of external bleeding; 3) there must be a complete absence of pain at the moment of the operation itself and, most importantly, after the psi-operation, there must be absolutely no traces left at the site where the tissues were 'parted' or incised. If even one of these conditions is not met, then it is not a Filipino psi-operation, but our Russian psychosurgical method. It must be stated plainly that, throughout the brief history of its development, only a few people have truly mastered the authentic Filipino method, whilst the rest have performed operations using our method, either without realising it or by deliberately deceiving others.

All the more so as the government and business interests associated with the international resort are trying to find some sort of
'attraction' to draw in tourists, and if there is no such
'attraction' does not exist, it is inevitably created artificially, as far too many people have a vested interest in it. Therefore, the 'Philippine phenomenon' is 99 per cent a tourist myth, attracting hundreds of millions of dollars to the Philippine Islands. Interested Western travel agencies publish various 'objective, reliable and authoritative accounts' in the Western media about various instances of the 'Philippine miracle' confirmed by the scientific community. The whole world is awash with bogus promotional videos, travel magazines and brochures, sensationalist articles in various newspapers and even reputable scientific journals, video cassettes, photographs and so on. One can only envy the Western tourism industry – they certainly know how to make money, there's no denying it.

Our research into the Philippine method has shown that in 60–70 per cent of cases there is a therapeutic effect, with one in every four or five patients making a full recovery. We would like to point out straight away that we are

all the cases we have observed over the last thirty years (over 20,000 cases), although only a few hundred ‘psi-operations’ have been carried out using the purely Filipino method during this time.

The most famous healer, José Pedro de Freitas (d. 1971), was a Brazilian labourer nicknamed ‘Arigo’ (the Simple Man). His abilities manifested unexpectedly in 1955 when, upon visiting a dying neighbour, he took a kitchen knife, thrust it into the patient’s body, excised a cancerous tumour, and the woman recovered. Arigo then performed thousands of operations without anaesthesia or sterilisation, using whatever sharp object came to hand. Arigo’s patients never felt any pain; their wounds did not bleed and healed quickly. Arigo himself was terrified of blood and would sometimes faint if he saw footage of his work filmed by a cameraman. Arigo always performed his operations whilst in a state of autogenic trance and claimed that, at such times, he was guided by the spirit of Adolf Fritz, a German surgeon who had died back in 1918. Although Arigo never charged for his work, he was nevertheless tried and punished on two occasions, even though renowned doctors spoke up for him, testifying that he had cured many without harming a single one!

Arigo’s successor, Edivaldo Silva, also put himself into a trance-like state, but used only his bare hands, plunging them into the patient’s body and leaving no scars. Silva believes that his hands are ‘guided by God’.

To better understand the art of Filipino healers, I shall describe in a little more detail what the Philippines is like today.

The Philippines is a south-eastern nation comprising more than 7,000 large and small islands, with its capital, Manila, on the island of Luzon. The 11 largest islands make up the bulk of the archipelago, which has a total area of around 300,000 square kilometres. The Philippines has a maritime, tropical climate. The islands are frequently hit by earthquakes, typhoons and volcanic eruptions, which cause a great deal of hardship for the local population. The average annual temperature is 25–29°C, but it is not the heat that troubles people most, but the mosquitoes. The islands are covered in extraordinarily lush vegetation, with many plant species found only on these islands.

The most striking feature is the palm trees – they provide housing, drinking water, chewing gum and everything else. The population numbers over 60 million people from more than 90 ethnic groups.

The population of the Philippines was formed from an ancient Negroid-Australoid substratum dating back to the 11th–1st millennia BC, upon which waves of South Mongoloid Austronesians from southern China (via Taiwan) were superimposed. From the beginning of the Common Era, when Malaya and the western part of Indonesia had already been Indianised, Indo-Buddhist culture began to gradually spread eastwards, including to the Philippines. Links with the Buddhist kingdom of Srivijaya, and later with the Hindu culture of Majapahit, played an important role in the development of the local population. Towards the end of the first millennium, Chinese people began to arrive in the Philippines, though these were no longer the southern Chinese Yue tribes who had arrived on the islands a millennium or two earlier, but rather inhabitants of a developed empire, bringing with them a multifaceted and sophisticated culture.

From the 14th century onwards, Islam spread to the southern islands of the Philippines and the first centres of statehood began to emerge. The islands were home to communities known as balangays, in which authority rested with the elders. The average size of a community was 30–100 families, though some were as large as 1,000–2,000 families. The most developed and powerful of these waged war against their neighbours, and if successful, the community elder would become the ruler of a proto-state comprising several communities.

Such leaders or rulers were initially referred to by the Indian terms ‘raja’ or ‘dato’. In the 15th and early 16th centuries, when the Portuguese expelled the sultan and his entourage from Malacca, some of them migrated eastwards and settled in the Philippines. Consequently, the population of the southern part of the archipelago rapidly converted to Islam, and the first political entities – the sultanates – began to emerge. Distinct forms of writing, based on the South Indian script, began to develop.

In 1521, Magellan’s expedition visited the island of Cebu, which led to the discovery and colonisation of the Philippines by the Spanish. Magellan himself perished, but by the mid-16th century the Spanish had firmly established control over the entire archipelago and named it in honour of Prince Philip (the future King Philip II). And in 1750, a major port – Manila – was built. The entire population of the conquered territories was successfully

converted to Christianity, except the Muslim south (the of the Moro-Moors), which remained a rebellious outpost right up until the 19th century. In 17th century the population of the archipelago numbered around 500 thousand people. The governors of the King and their provincial governors established some 270 estates, which were placed under encomienda (trust) by Spanish colonists and monastic orders. The encomendero, acting as trustee, would usually collect a fixed tax – the tributo – from the population entrusted to his care through the village elders, and required the peasants to perform various duties.

The encomienda system was subsequently abolished, and taxes were levied solely for the royal treasury.

At the same time, Chinese migrant communities (Huaqiao) were becoming increasingly established in the Philippines, conducting the archipelago's main trade operations. This was followed by the invasion of the Dutch, and subsequently the British. The Spanish began to focus heavily on the cultivation of tobacco on Philippine plantations, and by the 19th century had started growing sugar cane, hemp and indigo. A distinct national bourgeoisie emerged from among the Chinese and people of mixed Chinese descent.

In 1896, after nearly four centuries of Spanish rule, ties with the mother country were severed by a bourgeois-democratic revolution. However, Spanish rule was replaced by American colonialism, and it was not until 1946 that the Philippines gained independence.

The Philippines is the only Christian country east of the Dead Sea, where more than 130 languages are spoken. Philippine culture is a unique blend of Eurasian influences. Filipinos have brown skin. Ancient clan customs of patronage ('utang na loob') are still thriving. Every Filipino has a patron and a protégé ('bata') whom they themselves sponsor. The official languages are English (40 per cent), Spanish (20 per cent) and the local Tagalog, spoken by 48 per cent of the population. The main religions are Christianity, Islam, Buddhism and animism (the worship of spirits, sacrifices, animals, gods, etc.). The Roman Catholic Church accounts for 83 per cent of the population; 6 per cent are Protestants; 4.9 per cent are Muslims; 0.9 per cent are Buddhists;

5.2 per cent – independent churches. Thus, it is clear from the figures that Catholics dominate all spheres of life.

The first paranormal phenomena were introduced to the Philippines in 1905 by the French spiritualist Alain Kardec, after which the 'Union Expérimentiste Chrétienne des Philippins' society was established amongst the intelligentsia. From ancient times to the present day, Filipinos have believed in spirits, magic and magical images, in amulets and their power, in incantations, in witches ('asuan'), in miracles and in the possibility of divine spiritual healing through faith in God.

With the attainment of independence, as early as the post-war years, people (local 'yogis') began to appear in the Philippines who promoted yogic spiritual healing. In spiritual healing, the healer, in their view, 'acts as a channel, allowing energy to pass through the healer's consciousness into the patient's thoughts; through their powerful vibration, they stimulate the patient's mental centres, from where impulses are directed straight to the affected organs and systems, thereby healing them. By channelling the cosmic spiritual healing power through themselves, the healer, as it were, seeks to immerse the patient's own consciousness in the divine spiritual flow."

When beginning the healing process, one should be imbued with 'respect for the divine power'; the healer must calm themselves physically and mentally, casting aside all anxiety and concerns about material life. The healer must enter a special trance-like state of deep inner peace and harmony. Throughout the entire healing process, the healer does not think about what to do or how to do it; everything happens unconsciously and automatically, the hands act of their own accord, whilst thoughts can only hinder the transmission of healing spiritual energy.

The Filipino method requires that, throughout the treatment and afterwards, the healer be 'filled with love and kindness towards the patient'. As for those patients who do not believe in spiritual divine healing, they should not be treated badly, but one should simply 'not discuss the essence of the treatment with them'. However, the vast majority of local residents are deeply religious people, and their beliefs harmoniously blend elements of Catholicism, Hinduism, Buddhism and indigenous local paganism. Moreover, Filipinos are by nature very kind, good-hearted and sentimental people, in many ways similar to us Russians, but completely unlike

to Americans with their harsh, ‘money-centred’, egocentric worldview, which overshadows and stifles any expression of humanity and spirituality. Filipinos, like us, are altruistic and never sever their ties to their family and homeland. Like us, they simply cannot live without a homeland or connections to their loved ones.

Filipinos cherish their family ties deeply and always help one another, sharing responsibility for their actions.

At present, the Philippines has a system of state-run healthcare, private healthcare and traditional healing (folk medicine), which is particularly prevalent in rural areas where formal medical care is unavailable. Healers in villages treat patients using herbs, massage, holy water, manual therapy, amulets, poultices, compresses, bloodletting, leeches, acupuncture, potions, pranic energy, magical procedures involving spirits and, finally, psi-surgery. In towns, healers are more ‘educated’ and treat patients using acupuncture, yoga therapy, chiropractic and psi-surgery.

The psi-surgical method emerged relatively recently, in the 1960s and 1970s, based on yogic ‘pranic healing’ and the ancient shamanic practice, common to all peoples from Africa to the Americas and Europe, of extracting ‘disease’ from the patient’s abdomen in the form of a lizard, a spider, a mouse, a clot of blood, a lump of tissue, and so on. Psychosurgeons themselves explain their method as the ability of certain spiritually enlightened healers to ‘absorb’ cosmic ‘spiritual energy’ and, with its help, whilst in a trance, to penetrate through
‘molten’ (liquefied) tissue inside the human body, and then
use the ‘spiritual psi-energy’ emanating from the psi-surgeon’s hands to exert a healing effect on the diseased organ and cure it. If it becomes necessary to remove something, the psi-surgeon’s fingers grasp the tissue to be removed within the body cavity and ‘emerge’ together with it, where this unwanted diseased tissue is discarded and buried or incinerated. During psi-operations, an incision in the outer skin may be visible, internal organs may be exposed, and so on; afterwards, everything heals instantly without leaving any traces—it is sufficient simply to wipe away any bloodstains from the suture with swabs.

Psi-surgeons are trained for their profession from childhood, usually within their own family, where the profession is passed down, and then spend their whole lives engaged in

throughout their lives. The key to success is a profound faith in God and in the powers of God, which He bestows upon the healer. All psi-surgeons are Christians and members of
the ‘Unión Experimentista Cristiana de Filipino’. Some psi-surgeons, particularly those with extensive yogic training, claim that they are able to draw ‘special energy’ directly from the environment. This energy, ‘passing through the healer, is transformed within him and then transmitted to the patient through the laying on of hands or by penetrating the body. To this end, the healer, in addition to his yogic training, must be prepared mentally and physically; to this end, before each treatment he performs a special ritual and offers a prayer service’. It was not without reason that I recounted the history of the Philippines, as you can now see that the Filipino method is a very distinctive and original blend of yoga, magic (ritual) and Christianity (prayer service). In my account of the Filipino method, I shall endeavour to draw on others’ objective views of it, for if I were to write directly everything I personally think about it, readers might feel that I am being unfair and seeking to undermine their faith in the ‘Filipino miracle’ merely to glorify my own, Russian method, which fits within the modern scientific paradigm and fully corresponds to the fundamental modern scientific categories of knowledge.

A Filipino psi-surgeon must be able to ‘concentrate’ ‘energy’ within themselves, transform it into healing energy, and direct it into their fingers, eyes, tongue, breath, and so on. The ability of healers to enter a trance-like state enables them to ‘alter the structure and consistency of human tissues and, using only their fingertips, penetrate the patient’s body. This makes it possible to deliver healing energy more closely and directly to the affected area and achieve a better result’.

Some specialists in Filipino psi-surgery suggest calling it ‘quasi-surgery’ or ‘loguria’ (from the word ‘logos’ – mind), as it is believed that psi-surgeons operate first and foremost ‘with their mind, and then with their hands’.

The technique used in Filipino psi-surgery appears straightforward. An unknown patient, selected from the general stream of patients, ‘lies down on the table and exposes the affected area. To begin with, the psi-surgeon uses hand movements to create a powerful, uniform field around the patient, then places

his hands on the affected area and, as it were, feels for ‘something’, orientates himself, and his hands come to rest at a single point. The psi-surgeon concentrates his consciousness and enters a trance; then, after a few seconds, he thrusts his palms deep into the body. As he does so, he makes rapid, vibrating, forward movements with his fingers. One can see the first phalanges of the fingers entering the skin; the patient then feels light, tearing and pushing movements of the fingers deeper inside. The edges of the wound then begin to part, and the first blood appears. After wiping it away with a damp swab, one can examine the resulting cone-shaped wound and the underlying tissues, which are already bleeding less than the skin itself. The psi-surgeon performs these finger movements so rapidly that it is difficult for an outsider to follow everything and comprehend it. The psi-surgeon himself is not aware of the sequence of his actions and manipulations. The wound is closed with even faster movements of the fingers and palms of the same nature, but in the opposite direction (outwards), followed by the rapid withdrawal of the hands from the wound. The edges of the wound seem to stretch after the fingers and take their place the moment they are withdrawn. The elastic consistency of the skin disorients the observer. The surgeon makes a final series of checking movements with their fingers along the joined edges of the wound, and the surgical site is cleared of blood. In the first few seconds after the wound edges have closed, a whitish, slightly raised scar may still be visible against a background of slight redness; this fades and disappears after a few seconds. If there is a slight delay in cleaning the surgical site of blood, the scar may no longer be visible. No traces of the operation remain. Over the next 2–3 hours, the surgical site experiences a burning sensation and increased skin sensitivity. Sometimes pain sets in later, but this usually does not last long. The patient themselves is pale, agitated, often covered in sweat, and exhibits a pronounced autonomic reaction. They seem to perceive questions as if from a distance and answer them reluctantly and in monosyllables. The patient begins to move around actively straight away, but is nevertheless advised to rest in a quiet and peaceful environment for at least 30 minutes. Having followed all the recommendations, the patient returns to a relatively normal state after about an hour and goes home. The duration of the operation can vary from 3 to 15 minutes.

If the entire duration of the procedure is broken down into phases, creating the wound takes no more than 30 seconds, closing it takes another 30 seconds, and the remaining time is spent on the 'internal psi-operation'. The patient often continues to experience real physiological sensations at the site of the psi-operation for a further 3–7 days.

There are many manipulation techniques, but the most astonishing is the method of cutting tissue from a distance (Blancke, Agnao et al.). This is what most convinces sceptics of the reality of the 'Philippine miracle'; for example, Juan Blanco (Pasig) 'incises the patient's skin with a single cutting motion of his index finger from a distance of 15–20 cm. A small (2 cm) wound is formed, above which droplets of blood slowly appear. Almost all patients experience slight pain at this point, as if from a cut to the skin. The pain then disappears. The entire psi-operation is carried out through this small incision. The wound heals just as a normal cut would. Sometimes Juan Blanco takes a sceptic's finger in his hands and makes an incision in the patient's skin with it, thereby confirming that energy can be transferred in this way too. Blanco never experiences any complications with wound healing.' Here is the text of the prayer recited by the Filipino psi-surgeon when he 'charges himself with energy' before a psi-operation: 'O, you, great, boundless Power… You, the great flame of life, of which I am but a spark… I surrender myself to your healing Power, so that it may flow through me and strengthen, restore and heal this person… Let your Power flow through me, so that this person may feel your life-giving Energy, Power and Life, and may manifest it in the form of Health, Strength and Energy! Make me a worthy channel for your Power and use me for Good… Peace will come through your healing work!'

As we can see, the prayer service is very distinctive, although some psi-surgeons simply read the Bible (and sometimes all night long) before psi-operations.

There are also different approaches taken by psi-surgeons regarding the operating site. Some 'rub the skin with a solution of coconut oil and turpentine and quickly proceed with the psi-operations. Others rub warming oils (coconut oil, turpentine, grated camphor) or cooling oils into the skin in order to increase or restrict the blood supply to the area being operated on'.

Many psi-surgeons hold a piece of cotton wool in their hands, often moistened with water ‘to allow the energy to penetrate the wound more effectively’.

Cases of psi-surgery performed on animals and infants under one month old are particularly surprising, as they cannot be explained by hypnosis. It should also be noted that most psi-surgeons, prior to a psi-operation, attempt to ‘charge the patient with energy’ through ‘passes’ or other manipulations, thereby, as it were, boosting their ‘vital force’ and capacity for healing. Psychosurgeons initially accumulate this ‘energy’ through prayer in their own minds, and then in the right and left sides of the body. In the right side, they accumulate ‘positive’ energy, and in the left, ‘negative’ energy.

Some psi-surgeons specialise only in certain conditions – internal diseases, or dental problems, or paralysis, and so on. Psi-surgeons believe that ‘the most effective pathways for energy to affect a person are: the skin, blood, lymph, Chinese acupoints and Indian chakras’.

The physiological mechanism of psi-surgery differs fundamentally from conventional surgery. Whilst conventional surgery removes the mechanical cause of the disease, psi-surgery ‘does not always remove the mechanical cause; instead, the psi-surgeon simply acts directly upon the affected organ with their own energy, thereby restoring it to its normal state. For example, psi-treatment for appendicitis is carried out by opening the abdominal cavity and bringing the appendix outwards, not for removal, but to apply energy directly to it using a gentle massage with the psi-surgeon’s fingers. Afterwards, the appendix is returned to its place, and recovery occurs within a day, as confirmed by a follow-up examination at a state hospital.”

Some scientists (including myself) question the fact that, following psi-operations on bones or joints, the destructive changes that were present there prior to treatment do not disappear. Theorists of the Philippine method respond as follows: ‘But surely the aim of psi-operations is to restore pathologically altered function and to create favourable conditions for stimulating the body’s own forces, which will then begin to overcome the illness themselves.’ However, this explanation is taken entirely from our ‘Russian method’, which is indeed based on the patient’s own psychic-kinesis capabilities, rather than on the action of an unknown ‘Force’, as is the case with the Filipinos.

Often, psi-surgeons extract something from the body and discard it, usually showing it to the patient. What is removed is a bloody fragment of various bodily tissues: lymph nodes, connective tissue, adipose tissue, blood clots, etc. It should be objectively noted that this ‘something’ that is removed raises serious doubts among many scientists (including myself) due to its more than peculiar composition, which often has nothing to do with psi-surgery. Just like the sorcerers of ancient times, psi-surgeons explain the purpose of their manipulations with the ‘something’ being removed by the need ‘to focus their conception of the illness onto the piece of tissue being removed and, along with the piece, to remove the illness itself’. To put it in the language of modern magic, psi-surgeons thus extract the diseased information from the patient’s body, whilst the piece of tissue is merely an ancient psychotechnical method. But such an explanation is more suited to our method than to the ACLIPPINSKY method. All the more so because psi-surgeons refuse to treat mentally agitated individuals, people with a high temperature, patients with infections or suppurative processes, patients with congenital conditions or significant destructive changes in bones and joints, and individuals experiencing acute inflammation or a seizure, serious trauma, and so on.

The therapeutic effect of psi-operations does not always occur after the first psi-operation, but more often after several psi-operations, over the course of several days or weeks. In some patients, ‘no improvement occurs at all’.

Let us describe the process of psi-surgery and the conditions under which it is performed, using the specific example of psi-surgeon X. ‘X carries out treatments in an old wooden building comprising two rooms, each measuring 12–15 square metres. Most patients waited in the courtyard, under a canopy to shelter from the sun. Several patients waiting their turn sit in the first room. On the walls of the room are display boards featuring photographs of healers and psi-surgeons, along with clippings of reviews and interviews with them from newspapers and magazines. In addition, there are enlarged photographs of a psi-surgical incision in tissue at the wound site, clearly showing the edges of the wound, the psi-surgeon’s fingers and the internal organs. On another wall hangs a crucifixion of Christ and figures of the twelve apostles, as well as scenes from the life and travels of Christ. Along the walls are benches for the most seriously ill patients.

In the second room, in the centre, stands a high couch covered in oilcloth. The couch effectively divides the room into two parts: on one side are the psi-surgeon and his assistant, and on the other are those wishing to witness the psi-operation – the patient's friends or relatives, journalists, and so on. On the psychiatric surgeon's side, in the corner, stands a small table with surgical instruments: a few pieces of non-sterile cotton wool, a small bowl of coconut oil mixed with turpentine and grated camphor, a pair of scissors, a pack of bandages and a plaster. At the patient's feet stands a large (floor-to-ceiling) cross bearing the crucified Christ, crafted with great artistry and love; the depiction of the wounds and blood where the nails were driven in is particularly striking. The crucifixion makes a powerful emotional and psychological impression on everyone, especially the patient. Having listened to the prayer, seen this crucifix and made the sign of the cross, the patient calmly and with faith places himself in the hands of the psi-surgeon. Faith in divine assistance and the healing power of the psi-surgeon is of decisive importance and works its magic. The psi-surgeon performs the operation in his usual clothes, but a huge cross bearing the crucifixion of Christ hangs from his chest."

Psychosurgeons do not charge for treatment, but if anyone wishes to show their gratitude, they may place whatever amount they wish into a special box, which usually bears the inscription 'Fundraising to support the "Union-Experimentalist Christians de Filipino" Society'. Many psi-surgeons and well-known Filipino healers live off donations from wealthy patients or simply hold down some other ordinary job.

They live modestly but happily. They are happy to share their thoughts with tourists from the USA, Japan, China, Germany, France and elsewhere. They allow themselves to be photographed, filmed, interviewed, and so on.

Without exception, all healers and psi-surgeons are deeply and sincerely religious people; therefore, they begin treating patients by saying prayers and reading from the Bible directly over them during treatment. Often, after the prayer service, the Bible is placed under the patient's head or directly on the affected area.

Psychosurgeons have no knowledge of modern medicine, and often do not even know basic anatomy and physiology. More often than not, their preferred point of entry into the abdominal cavity is

is the periumbilical ring. Sessions usually last 4–6 hours, in the morning, starting at 9 or 10 o'clock, either daily or, less frequently, every other day. Each session begins with everyone present listening to a recording of prayers to God for the gift of healing spiritual power. The psi-surgeon goes round to all the patients gathered and selects those in the most serious condition to be treated first; of these, 5–10 people are chosen for psi-operations. This is followed by consultations with the selected patients and those returning for further treatment. An hour's break then follows, after which the psi-operations begin. During the break, the psi-surgeons and healers pray, drink tea or coffee, rest, chat, laugh, joke, smoke and pray again. No special preparation of the hands is required before an operation. The operations proceed quickly, often in silence. One patient stands up, another lies down. The psi-surgeon's movements convey a sense of concentration, intense focus and rhythm. If the psi-surgeon lacks sufficient energy and Power, the wound will not heal and will remain open; the patient may even die. All patients who have undergone surgery rest for about thirty minutes to prevent delayed fainting or increased pain at the surgical site.

After the operation, the patient must not wash their body, rub the surgical site with a washcloth, lift heavy objects or consume alcohol. After two days, the patient must attend a follow-up examination. If no improvement is observed during the examination, they are treated again, and so on until the desired effect is achieved.

Some researchers of the Filipino method state that the success of treatment using this method is accompanied by three beliefs: 1) belief in 'Divine assistance'; 2) belief in the 'Power' of the doctor; 3) belief in one's own healing.

At present, there are around a thousand psychosurgeons and various kinds of healers in the Philippines, but only a few people—no more than a dozen—are capable of performing purely Filipino psi-operations; the rest practise healing using our Russian method, but they do so poorly, incompetently, and therefore with little effect.

In the consulting rooms of some of the best-known healers who use the Filipino method, there is a portrait of my father hanging on the wall.

Now, having described the 'Philippine miracle' in detail, I would like to share the views of my father – Viktor Mikhailovich Kandyba,

President of the World Association of Professional Hypnotists and Psychics – the author of the 'Russian psi-surgical method'. V.M. Kandyba, as President of the USSR Association of Folk Medicine, is the world's leading specialist in this field; he therefore reasonably believes that the 'Philippine miracle' does not exist in reality, and that what we are dealing with here is an ordinary trance phenomenon, well understood by specialists, and, on occasion, a certain degree of deception, a deliberate one, characteristic of ancient magical techniques.

Unlike V.M. Kandyba, I shall refrain from such a harsh assessment of the Philippine method. Moreover, I am well aware that if one were to accept the very possibility of such a phenomenon, it would be necessary to completely rethink the established scientific paradigms of many disciplines. And yet, I need time to answer the question: is the 'Philippine miracle' reality or myth? I shall endeavour to answer this question only after a thorough series of rigorous and scientifically sound experiments; I do not recognise any other way of answering scientific questions.

So, let me explain our method. At the heart of psychic surgery, or psychosurgery is open by my father the ability of the human organismin SK states to dissolve certain of its own tissues without a trace. It is well known that in every living organism there is a constant metabolic process of the breakdown and elimination of certain cells and the formation of others; however, in deep SC states, a mechanism may be triggered that accelerates the breakdown and elimination of diseased cells in particular—and not only diseased cells. Our research has shown that, in isolated and very rare cases, the complete disappearance of diseased tissues can take no more than 3–5 minutes, or, less frequently, a matter of seconds. In terms of terms – in 1 per cent of people this psychosurgical process takes place within 3–5 minutes; in 10–15 per cent, it takes up to 2 days; in 70–80 per cent, up to 10 days; in 5–7 per cent, up to 2–3 months; and in 12–15 per cent of people, it is not possible to initiate this accelerated process of dissolving and eliminating the body's own tissues. Our research have shown that the following key psychophysiological triggers underpin psychosurgery in humans: trance (SK), a focused psychological mindset geared towards the desired outcome, acute, unbearable pain, and an emotionally charged mental image. Trance may in a person arise

autogenously – through self-suggestion and belief – as well as through specific heterogeneous means using various well-known psychotechnical methods or specialised preparations. Deep trance states create specific psychophysiological conditions within the body, whereby the so-called 'hidden' or 'reserve' capabilities of our organism come under the voluntary control of consciousness.

The second main 'trigger' factor – 'acute cutaneous pain' – is explained by the physiological fact that, per unit area of human skin, pain receptors are the most numerous. On average, per square centimetre of skin there are 2 thermal,
12 cold, 25 tactile and 150 pain receptors. These figures show that the triggering factor must specifically induce pain if we wish its overall effect to be maximised. Admittedly, we can 'simulate' massage techniques or apply cold or heat, but the effect will be significantly less effective.

The third key triggering factor is an emotionally charged mental image. SK science has established that a person's conscious (mental) psychological life is possible only thanks to the human brain's ability to interact with the external and internal environments through the language of images, where images constitute the highest form of universal informational interaction. According to the findings of V.M. Kandyba's research, human consciousness creates a special kind of matter – images – which have a physically real effect, in this case on the internal tissues and organs of one's own body. At the same time, emotions, as it were, energetically
'enrich' the mental images being created.

Visual mental images are the most powerful, although auditory, olfactory and other types are also effective. This is why even the ancients observed that strong visual, auditory, gustatory and other sensations, particularly when combined, form vivid images in a person's consciousness which instantly exert a physical effect on both the surrounding environment and one's own body. Ancient magic was based on this principle. Therefore, to trigger the psychosurgical phenomenon, the patient must actually see, feel, hear, etc., the entire process of the psychosurgical operation, so that a strong mental image of the actual removal of diseased tissue is formed in their mind. The same is done mentally

performed by the psychosurgeon when they simulate the operation and, as it were,
'removes' something from the patient's body.

Thousands of years of experience in Russian science have shown that the strongest psycho-imagery-forming effect is possessed by strictly purpose-driven rituals, rites, ceremonies, staged performances, etc., in which the hypnotic subject takes an active, real, role-based and purpose-driven part. The subject (i.e. the person we wish to influence) must 'immerse themselves' in the role of a patient who is confident of the impending 'surgical' healing; they must see, hear, feel and understand everything, as well as actively participate and empathise throughout the entire simulated 'operation'. Thus, the patient must 'act' authentically (as in Stanislavski's method) as a patient who believes in their healing and who is genuinely undergoing a real operation. Therefore, our method involves establishing a special pre-suggestive mindset; moreover, the patient does not know that the 'operation' is merely simulated; they are absolutely convinced that everything is being done seriously and for real.

So, apart from a well-staged simulation of a real surgical operation, there is another very important psychotechnical factor – the need to constantly and continuously(!) keep the patient's attention focused on the real physical sensations they are experiencing as the
'operation'. This is achieved through a specially structured, continuous physical contact involving pain and touch, accompanied by spoken dialogue, carried out by an SK specialist (psychosurgeon) in such a way that, throughout the entire duration of
the 'operation' the patient is not distracted for even a fraction of a second and constantly maintains a highly narrowed and steadily focused field of continuous attention solely on the sensations experienced during the operation.

In addition to those described above, there are two further secrets which we reveal only during face-to-face training in our method in St Petersburg, tel. (812) 219 111 98, on one-day courses in Russian psychosurgery. Anyone who wishes to take part in the training is welcome, so there is no need to worry too much that we are not revealing all our secrets. It is simply that I must meet and get to know a person before I pass on to them the secret of Russian psychosurgery, because after personal interaction

they will already be a different person, a true ‘psychosurgeon’, far better than any Filipino…

Psychosurgery can be performed in any psychotherapy or SK practice, by a psychotherapist or SK therapist who has undergone special training and certification with us.

The patient lies down on a couch, the ‘operative’ area (for example, on the abdomen) is exposed, and the psychosurgeon cleans the ‘operative’ area with a swab moistened with alcohol. The used swabs are placed on a medical tray or small plate held nearby by a nurse (incidentally, both are wearing gowns, as required), whilst the patient observes all this and reacts as they wish (they may talk, ask questions, share their expectations, describe the nature of their condition, or simply remain silent, etc.). The psychosurgeon then induces SK-2 in the patient (a trance state with eyes open and a clear consciousness) and instructs them to focus their full attention, not to be distracted by anything until the end of the ‘operation’, and to try to sense and understand clearly what is happening at the site of the operation, as well as to answer the psychosurgeon’s questions about the nature of their sensations quickly and without hesitation (!) answer the psychosurgeon’s questions about the nature of the sensations being experienced, and if the pain becomes unbearable, to report it immediately, as
the ‘operation’ is carried out without anaesthetic.

The psychosurgeon then asks the nurse aloud to hold the tray with dry cotton wool balls closer to the ‘incision’ site, so as to wipe away any blood should it appear. On the tray, all the pieces of cotton wool are arranged
in a ‘pyramid’ so that the bottom pieces are not entirely visible. The bottom pieces of cotton wool contain small capsules, well hidden and completely invisible, filled with blood or a very similar red substitute liquid.

On top lie ordinary lumps of dry cotton wool.

The psychosurgeon asks the patient to prepare to endure as much as possible and, using a specially sharpened fingernail on the index finger of their right hand, applies strong and very painful, scratching pressure – an ‘incision’ in the skin, mimicking an ‘autopsy’ (for example, of the abdomen). Despite a certain trance-like numbness, the patient must be experiencing unbearable pain at this moment, whilst the psychosurgeon says, agitatedly and sympathetically: “ ‘Please bear with it, please bear with it!’ He takes the lower swab and, squeezing it along the suture, moisten it along the suture and smears the suture, his hands and the entire swab with blood, as if

causing it to protrude slightly from the ‘wound’. Passing the blood-soaked swab past the patient’s face (so that they can see it), the psychosurgeon places it under their nose (which is held in place at all times by a nurse or assistant) next to the dry pieces of cotton wool. At the same time, questions are put to the patient: ‘Well, how does the incision feel? Is everything all right? Can you bear it?’ This is immediately followed by an extremely painful extension of the incision. Due to the pain, the patient should begin to perceive what is happening in a distorted way and should unexpectedly experience (or have a previous, faint sensation intensify) the feeling and absolute conviction that they are indeed undergoing surgery. The patient usually replies: ‘Yes, doctor, everything’s fine; it’s hard to bear, but I can manage.’ Following this reply, psychological contact is established and focused; this means that the psychophysiological mechanism
of the ‘operation’ has genuinely been set in motion. Indeed, research confirms this – psychosurgical operations proceed just as if they were real, and even better, with higher quality results.

So, following the patient’s response—from which it becomes clear to the doctor that the patient is taking everything seriously and genuinely—the doctor places all the fingers of their right hand on the skin on one side of the suture, and the fingers of their left hand on the opposite side, perpendicular to the suture, and begins to stretch the skin inwards with pressure until it tears. The doctor then moves both hands along the suture and ‘tears’ it open again. Whilst performing these tissue-tearing manoeuvres, the doctor asks the patient sternly: ‘Well! Can you feel the suture tearing and deepening?’ The patient usually replies: ‘Yes! Of course I do!” The doctor again quickly takes 5–6 special swabs and pretends to wipe away the blood and place the blood-soaked swabs on a tray. In doing so, 2–3 swabs are deliberately left around the suture to stem the blood flowing from the ‘wound’ down the body. Of these 5–6 swabs, 2 should be ordinary, 2–3 should contain blood capsules, and one should be a special swab in the form of a natural piece of beef—meat, fat, etc. The doctor then asks the patient to hold onto a couple of swabs for a moment so that, as he explains, they do not get soiled on the tray by the used ones, and gives the patient a couple of ordinary swabs. The patient holds these pieces of cotton wool in their hand and subconsciously reassures themselves once again that they are ordinary pieces of cotton wool. Why subconsciously?

Because they have long since been unable to think critically, having ‘gotten carried away’, slipped into the role and are actively participating in

a performance entitled ‘psychosurgical operation’.

The doctor then tenses the straight fingers of his right hand and, with a forceful vibration, presses them into the suture (‘open wound’) with all his might. The fingers disappear halfway beneath the fold of skin, sometimes reaching almost as far as the spine. The patient is in pain. The doctor asks him to bear with it and, bending his index and middle fingers, pinches the skin between them and pulls it upwards forcefully, as if imitating the pulling and tearing out of pieces of flesh from the patient’s abdomen. At the same time, the doctor tells the patient, ‘Now we’ll remove this filth and you’ll be healthy.’ As he says this, his fingers emerge from the abdomen already holding a piece of ‘prepared’ flesh. The doctor shows this ‘filth’ to the patient and, with disgust, places it on a tray amongst the bloodstained swabs, whilst mentally and figuratively imagining that the illness is truly being removed along with this actual filth that is being discarded. Now that the hands have been withdrawn, the patient feels relieved, and the doctor reassures them that it is all over now; the wound will now begin to heal instantly under the influence of the hands, and everything will be fine. At the same time, the doctor uses pinching movements of the fingers on both sides along the suture to pull the skin together, mimicking the instantaneous healing of the wound along the entire length of the ‘incision’. At the same time, the patient is asked: ‘Well! Is everything healing properly? If you feel that the wound has not healed properly in any section along the entire incision, please let me know. Agreed?’ Often, the patient will say that the healing process needs to be repeated in a particular spot, as they feel it has not healed properly there. In that case, the doctor must repeat the ‘healing’ procedure at the indicated spot until the patient confirms that everything is now in order. This is a crucial point; if it is overlooked, the patient will be troubled by the ‘unhealed’ section of the ‘wound’ for the rest of their life (or for a very long time).

The doctor then thoroughly wipes the remaining scratch with an alcohol swab and applies a plaster or re-bandages it, depending on the site of the ‘operation’.

Next, depending on how the patient is feeling – and they always feel as though they’ve just had a real operation – they are moved to a couch where they can rest. Depending on the site of the operation, the patient is not allowed to drink for 4–8 hours or eat for a day or two. The patient must lie down and wait to recover.

Sometimes, recovery and a dramatic improvement in the patient's condition occur immediately on the operating table, and the patient gets up on their own, thanks everyone, is overjoyed and goes home. At other times, the patient needs to be taken home after the operation by their carers and remains unwell for a long time, sometimes a week or two.

Regardless of the patient's condition, the doctor examines all patients every day. Those who are able to do so come to the doctor for a follow-up examination themselves, whilst those who are unable to do so are visited by the doctor every day (in the morning) at home.

In addition to the one described above, there are several other classic psychological techniques we use. For example, in cases of high SK susceptibility

The 'incision' is made 5–10 cm from the surface without direct contact. First, the suture line is lightly marked with a fingernail, and then the tissue is cauterised from a distance using the 'induced burn' effect. Next,

the 'operation' proceeds as usual, only without any blood. In another variant

the 'operation' is carried out entirely without swabs, 'pieces of flesh' and so on, relying purely on trance psychotechniques. When performing the 'operation' on the eyes, ears and other sensitive areas, there are certain details and differences which we teach our students on the courses. This includes the psychotechnical method for performing the 'operation' on a person without a trance.

On the day following the 'operation' and every day thereafter, the patient receives a Vedic massage using SK technology.

In the event of complications, which do sometimes occur, the patient must be admitted to hospital, just as after a real operation, and further treatment will depend on the circumstances.

For some psychologically challenging patients, an incision is made with a scalpel in the conventional manner, though not very deeply; otherwise, the procedure is carried out as usual.

Every psychosurgical operation using our method is a professional psychotherapeutic improvisation,

built upon existing experience and our own understanding of the possibilities of psychotherapy.

More than half of our 'operations' involve not the removal of diseased tissue, but healing, repositioning or shifting, improving functioning, and so on.

So, it should now be more or less clear to the reader that our method

of 'psychological surgery' or 'psychosurgery' is

psychotherapeutic improvisation, based on trance (SK), pain, imitation and role-play, continuous dialogue, narrowed and focused on the patient's sensations and attention, on visual props, dexterity and artistry, thought-image encoding, the authority and professional experience of the psychosurgeon, and so on and so forth.

Traditionally, our method is practised by my father. He does everything without blood, swabs or the like; his entire process is built on the interplay of imagination and suggestion, both verbal and mental. Of particular interest is his technique of psychosurgery, which he performs on an entire auditorium, simultaneously on several thousand people; In this variant of collective psychosurgery, the main secret lies in SK and the ability to sharply increase, using a special psychotechnical method, the initial susceptibility of the audience-patients to SK (or, as it was previously called, 'increase their hypnotic susceptibility').

In some cases, the effectiveness of the procedure can be enhanced by using special finger caps—which mimic the finger itself—filled with blood or a red liquid; the cap itself, crumpled and bloodstained, is then presented as a piece of diseased tissue extracted from the abdomen, which is, as it were, the primary cause of the illness. And now, with its 'removal', the patient should recover.

Our research shows that if 10–15 special 'dummy' SK sessions are carried out beforehand to deepen the trance, the therapeutic effect of the psychosurgical operation will be greater than if the operation were actually performed by a real surgeon.

In some cases, when a patient is deeply susceptible to SK (i.e. 'deeply hypnotisable', to use the old terminology), the therapeutic effect of psychosurgery, when performed to a high professional standard, significantly exceeds that of a real surgical operation.

Summing up my experience, I maintain that psychosurgery is just as much a physical reality as conventional surgery. Moreover, in psychosurgery, the body's reserve capacities are consciously utilised, and everything actually takes place in a very real way. I maintain that it is even more 'real' than in conventional surgery, since the human psyche is just as much a physical reality as a scalpel or any other object. And yet, the mystery in all this

lies in the astonishing, often hidden, capabilities of the psyche that each of us possesses—and which are also found in animals, plants and even microorganisms…

WALKING ON FIRE

V. Leroy's book *The Salamander Men* contains a description of a fire-walking ceremony that took place in the vicinity of Madras in the presence of the Catholic Bishop of Mysore (who sent his account to Leroy) and the local maharaja. The ceremony was presided over by a Muslim man who conferred immunity to fire upon all those who were to walk through the flames, whilst he himself never once approached the fire. Some walked into the fire of their own accord, whilst others were literally pushed into it; and, as the bishop wrote, the look of terror on their faces gave way to a look of astonishment. The musicians of the maharaja's brass band were also made to walk through the flames. They were so thrilled by their success that they repeated the walk, blowing their horns and striking their cymbals – it was a sight one does not see every day. According to the bishop, the rising tongues of flame licked their instruments and faces, yet their boots, uniforms and even their sheet music remained untouched.

Max Freedom Langer described in detail how his mentor, Dr W.T. Brigham of the British Museum, accompanied by three kahunas – local magicians – walked across the scorching lava on the Kone volcano. The sorcerers ordered him to take off his boots, as the protection of the god Kahuna did not extend to them, but he refused. Brigam watched as one of his companions walked slowly across the lava flow; at that moment, the other two suddenly pushed him, and, finding himself on the scorching lava, he was forced to run towards the opposite edge of the flow. By the time he had run 150 feet across it, his boots and socks had burnt away. The three kahunas, who continued to walk barefoot across the lava, burst out laughing, pointing at the pieces of burning skin trailing behind him.

In her book *Wild Women*, Rosita Forbes described how, in Suriname, the descendants of African slaves who had intermarried with the local population danced in the fire under the guidance of a virgin priestess. During the dance, the priestess was in a trance. If she were to suddenly snap out of it, the dancers would lose their immunity to the fire.

The phenomenon of fire-walking should be considered from two perspectives: as a purely physical problem involving the interaction of two different bodies, and as evidence of the human body's capabilities.

Each of us associates a particular temperature with subjective sensations of heat or cold (and this does not always correspond to reality). For example, a wooden post in winter feels much warmer than an iron nail driven into it. In a sauna, that same nail will be scorching hot, whilst a wooden shelf will be merely pleasantly warm. Since the temperature of the objects being compared is the same, yet our sensations of heat or cold when touching them differ, this means they depend not only on temperature but also on the physical properties of these objects.

When we touch an object with our hand, heat exchange always takes place between it and our hand. As a result, the temperature of the skin's surface, where our thermoreceptors are located, changes. The temperature of the object at the point of contact also changes: if it is colder than our hand, the object heats up at the point of contact; if it is warmer, it cools down. Moreover, the lower the thermal activity of the heated object, the more we cool it down and the cooler it feels to us. Thermal activity is a characteristic of a body that depends on its density, specific heat capacity and thermal conductivity. The higher these values are, the higher the thermal activity.

Metals have the highest thermal activity – 10,000 units. Light, porous bodies (such as charcoal) have a thermal activity of 100–200 units. The thermal activity of human skin ranges from 800 to 1,500 units. Moreover, the highest activity is found in well-nourished skin, and the lowest in dry skin (such as that found on the soles of the feet, particularly where there are calluses).

Our skin has an interesting characteristic: changes in temperature on its surface occur almost instantaneously, and then the temperature remains constant for several seconds (a so-called 'temperature jump' forms on the skin's surface). It is this phenomenon that allows a dancer on red-hot coals to take their time – they feel the same thermal sensation half a second later as they do three seconds later. That is why some dancers can afford to stand on red-hot coals

several seconds without moving or to walk as if at a leisurely pace, which, of course, makes a strong impression on the audience.

When the thermal activity of the body being tested is significantly greater than that of the skin, the skin takes on the temperature of the object (for example, when touching metal). If, however, its thermal activity is significantly lower, the skin's temperature remains almost unchanged (which is why fur feels warm to us even in severe frost). You can carry out a simple experiment. If you heat a five-kopeck coin and a piece of charcoal in an oven, for example, to 200 degrees and touch them, you will easily find that the coin burns, whilst the charcoal feels barely warm. This simple experiment provides the 'key' to understanding the phenomenon of walking on hot coals, i.e. why a person (with the right mindset) does not get burnt by burning coals.

In the theory of heat conduction, there is a formula for calculating the change in the surface temperature of bodies when they come into contact. If we assume that the temperature of the coals is 600 degrees, their thermal activity is 100 units, and the thermal activity of the skin is 1,500 units, then the calculation shows that the increase in skin temperature over a few seconds of contact with the coals is 35 degrees, and consequently, the total temperature reaches just 72 degrees! The sensation of heat would be roughly the same when touching a sheet of metal heated to no more than 70 degrees.

F. Karger, a researcher at the Max Planck Institute for Plasma Physics (Germany), conducted the following experiment. Before the start of the ritual 'fire dance' performed by the indigenous people of the Fiji Islands in the Pacific Ocean, the scientist applied a layer of temperature-sensitive indicator paint to the soles of one of the dancers' feet.

The researcher also coated the pieces of basalt on which the ceremony participants walked with the same dye. Based on the colour changes in the indicator, F. Krieger determined that the maximum temperature of the stones at the points of contact with the dancers' soles was around 330 degrees. Yet the colour of the ceremony participant's painted feet at the most critical moments corresponded to a temperature of just 83 degrees, no more.

In fact, the red-hot coals (or stones) cool down beneath the fire-walker's feet to moderate temperatures, close to the safety threshold. This can literally be seen: darkening marks

, darkening tracks are left behind. Perhaps this is the phenomenon Virgil had in mind in the *Aeneid*:

> The heat devours us, yet we press on, strong in our faith,
> Through the fire, leaving our footprints upon the smouldering coals!

Of course, the glow fades only in the thin surface layer of the charcoal, and the dark trail left on the carpet of fire flares up again as soon as one's foot steps onto another spot.

The process of preparing the coals necessarily involves breaking them down into small pieces, roughly of the same size. The coals must not contain any objects with high thermal activity (such as metal). According to the laws of thermophysics, touching them will inevitably cause a burn. This is also confirmed by the nestinari (as fire-walkers are known in Bulgaria). When asked by a reporter whether they ever get burnt whilst walking, one of the 'fire dancers' replied: 'No, never. But if a nail or a metal cap from a lemonade bottle falls into the fire, then we do get burnt. We are powerless against red-hot iron.'

It should be noted that immediately after the experiment with the indicator dye, F. Karger placed a piece of hardened skin, cut from the sole of a dancer's foot, onto one of the stones. Within a few seconds, this piece, much like a scrap of fabric, was charred. The scientist concluded that, alongside purely physical laws, the laws of the human psyche also come into play when walking on fire, the mechanism of which has not yet been fully unravelled.

Professor Arnaudov and Dr Gorvalova (Bulgaria) believe that 'the phenomenon can be explained on the basis of Academician I. Pavlov's physiological theory of higher nervous activity.

The fire-walker's absolute certainty that she will not suffer burns, combined with a rapid dance in which her feet barely touch the coals – that is the secret of fire-walking."

The American anthropologist S. Kane believes that the astonishing abilities of firewalkers are a classic example of the predominance of the power of self-suggestion over nervous excitatory processes involving a substance known as

‘bradykinin’. Firewalkers are likely able to suppress its activity through an act of will. At the same time, the blood vessels in the legs constrict, which reduces blood flow (or, in the language of physics, decreases the thermal activity of the skin). This corresponds to the subjective sensations experienced by those taking part in fire dancing. When the Bulgarian fire-dancer Neven was asked how she manages to perform her art two or three times in a single evening, she replied:

‘I don’t know myself. As soon as the music starts, it feels as though the blood drains from my legs, my feet go numb, and I myself fly over the red earth as if in a dream.’

The psychological state of mind prior to fire-walking may involve complex preparation, including dancing, singing, and being touched by a magician or priest ‘responsible’ for the ritual, etc., and may be completely imperceptible to those around them and to the participant themselves. As for cases of burns, where the ‘faith suddenly faltered’ in those walking on the coals, there is no need to invoke ‘some new reality in which the fire does not burn as usual’ to explain them. The fire burns as usual, but for some reason, sudden changes might have occurred in the person’s psyche, resulting in a sharp increase in the thermal activity of the skin and, consequently, the person sustaining burns.

As for the instances of people walking through tongues of flame, these were most likely the product of the imagination of an impressionable witness to the incident. In any case, brief contact with open fire is possible, for example, during ritual fire-jumping practised by various peoples. However, there are no scientifically verifiable facts regarding people remaining in the flames for any length of time.

In the Soviet Union, the artist Valery Avdeev mastered the art of fire-walking. He also believes that the key factors are a special mindset, a state of elation and self-confidence, which he acquires through mental preparation for walking on hot coals. Eyewitness accounts have survived describing how, during the Great Patriotic War in Stalingrad, following one of the air raids, people saw a weeping three-year-old child walking across the smouldering beams of a ruined house. When he was taken to a doctor, the doctor noted with surprise that there were no signs of burns on the child’s body. That child

was Valery Avdeev. It is possible that V. Avdeev's unique psychological constitution manifested itself as early as childhood: under the influence of severe emotional shock, the child's skin's thermal activity changed spontaneously.

In the late 1970s, V. Avdeev decided to master the art of firewalking. As the artist recalls, he was overcome by an overwhelming desire to overcome his fear of fire: 'And I decided: whatever the consequences of my experiment, let my feet get burnt, let me end up in hospital, but I will go… I'll do it! I must!'

To produce the embers, a bonfire was lit, and the embers were then levelled out to form a 10-metre-long path. And Valery Avdeev walked that distance. The next day, whilst attempting to repeat the experiment, the artist believes he failed to 'get into' the right state of mind and… suffered burns. It is possible that, as a result of the preliminary psychological preparation, the skin's thermal activity rises to the required level (1,500 units). If this does not happen, then the person gets burnt.

It can therefore be said that the ability to walk on fire is a fusion of the laws of physics and human capabilities. And in this case, a person's willpower and perseverance are capable of working real miracles.

MYSTERIOUS FORCES

As for the ‘unknown forces’ acting upon people and causing them to make movements that are inexplicable even to themselves, the following can be said. Yes, there are indeed states in which a person cannot control their own actions. For example, quite often the arms seem to disobey, or the legs move of their own accord to the left (or right), even though the person does not wish them to. There are several reasons for this. Such phenomena arise as a result of a temporary disruption in cerebral blood flow (for example, in the case of vegetative-vascular dystonia). At the same time, consciousness is not lost, and sensations are preserved.

People who are hypnotisable (easily susceptible to hypnosis) often slip into a hypnotic state whilst driving on a monotonous stretch of road. And then they may perform actions that are unexpected even to themselves.

There are documented instances of behaviour in a state of epileptic absence (a brief unconscious state), where there is an instantaneous loss of consciousness whilst motor activity continues. For example, the following case is known from legal records. A female driver with twenty-five years’ experience unexpectedly, and to her own surprise, crashed at full speed into a queue of people standing on the pavement, then performed several manoeuvres (which even expert racing drivers were later unable to replicate) before coming to a halt. She admitted full guilt and was eager to be convicted. She was unable to explain what had happened. And this is not an isolated case.

During medical research, the motor centre of a patient’s brain was stimulated using an electric current. The subject felt as though someone was calling him, and he wanted to turn his head. He was then instructed by the experimenters not to turn his head. As the current was increased (i.e. the degree of stimulation), the muscles turned the head of their own accord. The patient had the distinct sensation that some ‘unknown force’ was doing this to him. It is quite possible that a similar spontaneous excitation of this centre could occur and, as a result, the sensation of ‘invisible barriers’, ‘unknown forces’ acting upon a person.

The case of the young maid is typical of one variant of schizophrenia, in which the patient experiences a sense that they cannot control their own body and that an outsider is doing so for them, ‘erecting’ barriers, invisible walls and obstacles, and has ‘taken control’ of them. After all, the girl was in a depressed state (she was homesick).

Now we shall turn to the intervention of mysterious forces in what we currently regard as reality. We are particularly interested in one widespread but little-studied phenomenon: invisible barriers that inexplicably arise in the path of people, animals and even machines. In the Old Testament (Numbers 22:21–33), there is a story about Balaam and his donkey. The instructions Balaam received from God forbade him from taking a certain route, yet he immediately decided to disobey them. And what happened? The donkey refused to carry him along the path he intended to follow, no matter how hard he whipped her. Then she braced herself against a wall. He began whipping her again with all his might. Eventually, the donkey lay down in the middle of the road, and no amount of beating could move her from the spot. The biblical explanation for this, put into the donkey’s mouth, is as follows: her stubbornness was caused by the fact that the ‘angel of the Lord’ was blocking the road each time.

Fort noted a whole series of ‘attacks’ on cars in April–May 1927. During these ‘attacks’, cars were forced to swerve off the road in all directions. In one instance, a driver described how he tried with all his might to keep to the right-hand side of the road, whilst some unknown force compelled him to veer to the left. One could add many more such cases from our own time; for instance, in Sanbury, Ontario, Mrs Selina Legris was fined because, due to her inattention, the car she was driving crashed into another, resulting in a fatality. The local newspaper, *The Recorder and Times*, dated 24 January 1969, quoted the offender, who denied her guilt and stated: ‘Some invisible force seemed to lift my car and hurl it with great force across the centre line of the road into oncoming traffic, where a head-on collision with an oncoming car occurred.’ Whether this was true or not, what court would have believed her?

Mysterious accidents and stalled car engines were often attributed to the action of equally mysterious ‘rays’. In one of the earliest known cases of this kind, the engines of around forty cars stopped working for nearly an hour. This happened on a road in Saxony (*The New York Times*, 25 October 1930). The subject of so-called ‘secret rays’, which were capable of bringing cars to a halt, was hotly debated in the media in 1923–1924. A certain Englishman, Grindell-Matthews, even claimed that he had invented such rays (The Daily Mail, 5 April 1924).

Later, the idea of ‘death rays’ – as well as rays capable of bringing vehicles to a halt – was revived in rumours of ‘wonder weapons’ during the Second World War.

The effect of ‘invisible rays’ often features in old tales of fairies, ghosts and magicians. We frequently hear of spells that bind a person, which can only be broken by the one who cast them. The editor of the collection *Ghosts and Legends of Rural Wiltshire* (1973) Catherine Wiltshire recounts a story told by a ninety-year-old shepherd about a cart driver who worked with him on a farm in Newton Tony. One day, this man was driving a cart laden with firewood when he encountered a woman known in those parts as a witch. She asked the cart driver for permission to place her small bundle in the cart. He refused and cracked his whip to urge the horses on, but they refused to move. The cart driver had no choice but to unhitch them and lead them home. The next morning, the farmer set off with the coachman, but when the horses reached that spot, they once again refused to pull the cart laden with firewood. It was only when the farmer and the coachman agreed to take a bundle of brushwood for the ‘witch’ that they managed to get the horses to pull the cart.

In the book *Operation Trojan Horse* (1970), John Keel recounts how, in the 1620s, General Andrew Jackson visited Bella’s farm in Tennessee to investigate rumours of a local evil spirit. As he approached the farm, the wheels of his carriage suddenly seemed to freeze into the ground: no matter how much they urged the horses on, no matter how much they lashed them with their whips, they stood rooted to the spot. Unexpectedly, the general’s companions, irritated by the horses’ inexplicable stubbornness, heard a voice ringing out, sounding like the clang of

metal: ‘All clear, General, the carriage may proceed.’ And Jackson’s carriage set off.

In the London weekly *Weekend* (21–27 October 1970), accounts were published from several eyewitnesses who had encountered an entire ‘ghost army’ blocking their path on a road near Otterburn, Northumberland, where a full-scale battle had taken place as far back as the 14th century. One of the witnesses, Mrs Dorothy Strong, was travelling in a taxi at the time. ‘Suddenly,’ she recounts of the incident that took place in November 1960, ‘our car’s engine cut out, the speedometer started spinning like mad, and, sitting in the car, it felt as though we had hit an invisible wall. We were surrounded on all sides by soldiers, who then suddenly vanished into thin air.’ The most interesting thing is that some local residents say that similar things have happened in these parts before.

It is quite common to read that, upon encountering ‘fairies’, horses stop and refuse to go any further, unable to cross the line beyond which magical music can be heard from the roadside or ‘fairies’ are seen dancing in a circle. It is said that Saint Thomas Aquinas, who learnt the art of creating magical images from Albert the Great himself, was so troubled by the clatter of hooves in the street, which disturbed his studies, that he cast a copper horse and buried it in the middle of the street, opposite his window. After that, no horse could be made to walk down that street, no matter how much it was whipped.

People who have found themselves in a place or other enchanted by fairies also speak of invisible barriers. Dermot McManus devotes a chapter of his book *The Middle Kingdom* (1973) to tales of enchanted patches of land. In 1935, his aunt in Mayo sent a young maid from a neighbouring village on an errand.

She was to walk past Liss-Ard – a hill crowned with a beech forest, on which stood one of the most famous ‘fairy forts’ in the district. The girl was feeling very homesick, and, as she had time to spare, she climbed the hill to look down on her home village from the top. She then began to make her way down the slope towards a clearing. ‘No sooner had she set foot in it than she felt a strange jolt: it seemed to come from within rather than from without. Before she had time to realise what was happening, the girl was already walking briskly in the opposite direction

– into the thick of the forest, back the way she had just come.' The same thing happened a second time when she tried to make her way down to the clearing. She then decided to leave the forest at the spot where she had first entered it, 'but this time the greatest shock awaited her, for she felt that she was surrounded by an invisible wall'. When the invisible wall disappeared, the frightened girl ran home.

Another famous incident took place in India, when an elderly yogi stopped a train 'with a glance'; the old man sat down on the ground beside the train and watched as it tried for a long time to move off, but could not. Frightened by this miracle, the conductors began to beg the old man to get back on the train and travel wherever he wanted, even without a ticket. The old man went aboard and sat down in a carriage. At that very moment, the train set off.

There are many folk tales about the ability of certain people to stop galloping horses with a glance, using a 'mysterious power'—much like the gypsy woman did in the film *The Caravan Goes to Heaven*, or as Abbé Faria and his pupil, the Count of Monte Cristo, did, who could do anything to a person with a mere glance, completely subjugating them to their will. And the most 'scientific' evidence for the existence of this 'mysterious power' comes from experiments conducted by 'scientists' with Uri Geller, Ninel Kulagina and other celebrities, who did indeed demonstrate 'something of the sort'…

‘WEEPING’ ICONS

The thinking of the ancients (which is described as both ‘mythological’ and
‘archaic’ and ‘illogical’) established a connection between all existing objects and people through empathy, sympathy (which in Greek means ‘empathy’) of souls or spirits inhabiting objects. Therefore, for a person in antiquity or for an Australian Aboriginal, the interdependence of phenomena which, in our view, are in no way connected, seemed entirely natural. This applies particularly to the prophecies and warnings sent to people by spirits or gods.

Humankind learnt to glimpse into the future at a fairly early stage. By observing natural phenomena, people could predict the weather, the timing of agricultural work and so on with reasonable certainty. However, such factual information was inseparable from ‘information noise’ – in this case, divination and superstitious omens. The flight of birds, the cawing of a crow, a hare darting across the road, and much, much more were taken as omens of success or failure, death or victory. Divination books, dream interpreters, omens and all manner of interpretative works have come down to us from ancient times.

The desire to fit a particular event into a system, to link it to what had gone before, often led to omens being invented retrospectively or at the very moment the event occurred. Most accounts of
‘weeping’ images of ancient deities, as passed down by ancient writers and chroniclers on the basis of hearsay. Paganism was a rather practical religion: a pagan’s faith required constant material confirmation.

Christianity did not permit the acceptance of just any miracles, but only those which, from the clergy’s point of view, undoubtedly
a ‘divine cause’. The masses, who had preserved and brought many pagan beliefs into Christianity, needed, in the opinion of many pragmatic clergymen, a miracle – and this view was repeatedly vindicated. Protestantism, which emerged in the 16th century, banished many superstitions from the Reformed church, declaring them
‘papist delusions’. Lutheran, Calvinist and other

Protestant doctrines do not recognise the miraculous appearance of tears, blood, sweat and the like – and parishioners do not witness such ‘miracles’.

In the same 16th century, at the Council of Trent, the Catholic Church, in its struggle against the Reformers, declared many of the former ‘miracles’ to be superstitious and impossible. Yet the belief in weeping or bleeding icons has persisted amongst Catholics to this day. Rumours of such occurrences tend to spread during times of turmoil: this was the case during the Spanish intervention in Italy and the sack of Rome, mentioned in this chapter, and it was also the case in 1920 in Ireland during the civil war.

As for Orthodox ‘weeping icons’, we at least have more documented evidence. Every investigation into such icons – from Peter I, who personally opened up a ‘miraculous icon’, to the campaigns to exhume relics and verify ‘miracles’ carried out in the early years of Soviet rule – has shown that the ‘miracles’ were fabricated by church officials. Judging by certain details, modern ‘miracles’ are also man-made: they are either carried out for selfish motives, or their perpetrators are pranksters and hoaxers.

And it is hardly surprising that the clergy themselves, following such exposés, were forced to admit that the ‘miracles’ turned out to be man-made. The only difference lies in who created them: priests and monks seeking to stir up religious fanaticism and derive material gain from it, or mystically inclined people yearning for a miracle. But this is of little consequence to an open-minded person, for whom any ‘miracles’ are the result of self-deception, hoaxes or charlatanism.

TELEPATHY AND CLAIRVOYANCE

Debates about telepathy have been going on for many years, says O. Moroz. From time to time, newspapers report that convincing evidence of the existence of this phenomenon has been obtained somewhere abroad; however, these reports are subsequently forgotten.

We have our own ‘telepaths’ too. At one time, Yuri Kamensky and Karl Nikolaev gained notoriety; they were said to have carried out a series of successful telepathic experiments. In truth, it would be a sensation if it could be proven that an exchange of thoughts is possible between two people sitting in adjoining rooms. But neighbouring rooms are hardly exciting. Now, if there were thousands of kilometres between the ‘telepaths’!... In one experiment, Nikolaev travelled to a distant Siberian city, whilst Kamensky remained in the capital.

“During the sessions,” wrote one newspaper in an article entitled ‘Moscow–Novosibirsk Telepathy’ – Nikolaev perceived the images of the dumbbells and the screwdriver quite clearly… When receiving other images, a multitude of associative interferences crept in. The experimenters, however, believe that, taking this initial experience into account, these interferences can be reduced in future… The session with the cards Zener [1]has not yet been fully analysed. But it is already clear that the number of matches between transmitted and accurately received images is higher than the number of possible random matches calculated using probability theory.

The author of the article supplemented the experimental data with his own observations. ‘In conclusion,’ he wrote, ‘I would like to note that I personally had the opportunity to test the telepathic abilities of K.N. Nikolaev and Y.I. Kamensky. This leads me to concur with the view of those Soviet scientists who believe that all people possess the ability to transmit thoughts, albeit to varying degrees. And that these abilities can be developed through training.’

Less than a year later, another newspaper reported on a new experiment, this time a thought-transmission session between Moscow and Leningrad. The new article differed from the previous one in its enthusiastic tone:

‘The express train travels at a speed of 160 kilometres per hour. The propagation speed of radio waves has been precisely measured at 300,000 kilometres per second… And what is the speed of thought, with which it covered the distance between Moscow and Leningrad without the aid of radio or telegraph? It was precisely such experiments in the transmission of thought between Moscow and Leningrad that were carried out…’

And here is how the experiment itself was described:

‘Light flashed into Kamensky’s closed eyes. The flashes from a bright lamp followed one after another. Even through his closed eyelids, Yuri could feel the brightness of the beam. He tried to visualise Nikolayev in his mind’s eye and convey to him his sensation of the light. Nikolayev saw Kamensky and squinted. But there was nowhere to hide from the beams…’

This was the first stage of the experiment. Then the second began:

“In Moscow, Yuri Kamensky looked, at various intervals, at a plastic toothbrush, a box of ‘Java’ cigarette papers, and yet another object whose name he himself did not know – these had been brought in sealed packaging from the Polytechnic Museum at the start of the experiment. He was to convey the images of these objects. Yuri opened the
‘Java’ and imagined Karl taking a cigarette from the empty packet.

At that very moment, Karl was jotting down notes in his notebook, barely keeping up with the rush of images: ‘… I can just make out a cigarette (distracts from writing). There’s a lid; it’s empty inside. The surface isn’t cold. Cardboard.’

Finally, the third stage:

‘… On the second day of my stay in Leningrad, something happened that only radio was capable of. Words were broadcast.’

So, it would seem that evidence had been obtained. Alas, following these publications, the sceptical attitude of the majority of scientists towards telepathy remained unchanged. Then a group of enthusiasts approached the *Literary Gazette* with a request to publish an article entitled ‘Parapsychology – the Science of the Future’. With the results of the Moscow–Novosibirsk and Moscow–Leningrad experiments in mind, the authors spoke of telepathy as something that had been conclusively proven. Telekinesis, clairvoyance and skin vision were also included in this discussion…

‘The results of parapsychological research,’ the article stated, ‘are not only of scientific and theoretical interest, but also enable us to address a number of practical issues. These include the realisation of biotelecommunication – the transmission

information beyond the technical means of communication currently available, improving the effectiveness of educational processes, and retrieving information from the depths of human memory…'

Well, good intentions. But does bio-telepathy actually exist? At our request, authoritative experts examined the protocol for the telepathic experiments and concluded that these experiments had breached a number of methodological requirements, compliance with which is essential in experiments of this kind. The protocols were drawn up in gross violation of generally accepted rules, and the results of the experiments could not be interpreted unambiguously.

For this reason, we decided to postpone publication of the article until more convincing evidence of the existence of telepathy is obtained. We decided to conduct a control experiment.

Of course, it is not a newspaper's role to engage in scientific research, but what is to be done if scientific institutions are unwilling to address this subject, regarding it as frivolous, whilst readers are interested in it?

A newspaper experiment is a labour-intensive undertaking. For the sake of a dozen or so pages of text, a great deal of organisational work has to be carried out, work not provided for in the usual editorial schedule. It is far easier to print a regular article.

Be that as it may, the experiment began. Just as in a real scientific experiment, a committee was set up and a methodology devised. Following the example of the two previous experiments, it was decided to conduct a telepathic communication session between two cities some distance apart – Moscow and Kerch. At the request of the 'telepaths', it was decided to transmit images of objects.

The committee selected 50 pairs of objects, ensuring that each object differed from the others in several distinctive features. This resulted in two identical sets. One remained in Moscow, whilst the other was sent to Kerch.

And so, on the appointed day and at the appointed time, the Moscow section of the commission gathered at the psychophysiology laboratory of the Moscow Research Institute of Psychiatry
of *Literaturnaya Gazeta*. Lots were drawn to decide which object to pass on first. Object number nine: a rubber eraser. It was passed to
to the 'inducer' – Y. Kamensky. At the agreed time, he begins to transmit the image of the object.

At that very moment, the ‘recipient’, K. Nikolaev, sitting in the rehearsal room of the Kerch City Theatre, tries with all his might to receive the image suggested by Y. Kamensky. His face is red. Sweat is trickling down his forehead.

Nikolaev describes the object he sees. This description is recorded on tape. One of the commission members also makes a handwritten record for verification.

The suggestion and the session last 10 minutes.

‘Thin, thin, like a corkscrew,’ says Nikolayev, ‘I saw—I saw it only vaguely—a corkscrew, thin and elongated, like a corkscrew, double, long, smooth, with a pointed tip.’ At the bottom, like a handle, wooden; very much like a corkscrew, unless it’s just my imagination, but another one appears, round—it’s one of two—completely round, polished, perfectly smooth, light in colour; it’s not metal, and there’s something drawn on it, there are patterns, there are patterns, curved like a bowl, smooth, smooth, round, light in colour, there’s something greenish about it—probably greenish patterns—blimey, there’s that corkscrew again—how can I reconcile these? Round, flat, round, curved, long, something flat, elongated, can’t make sense of it at all; there’s this thin rod, one that’s flat, smooth, not metal… and the rod’s metal, the rod’s metal, the rod’s elongated, thin, smooth, rings, some sort of rings, a handle at the bottom, that damned corkscrew’s popping up again, a saucer, it’s caught on, the elongated part remains, the silvery part remains, the pointed end remains, the rings remain, elongated, long, the pointed end is distinct, thin and round, uneven, at the bottom either a cork or wood, a cork in my hands, the handle is rough… brownish, it is there and relentlessly pursues the saucer, spinning it; ribbed, elongated, a pointed tip, rings; it is doing something, either piercing or cutting.

At the end of the day, Nikolayev, together with his assistants, made an entry based on this description: the image of a porcelain saucer (item number thirty-two) was transmitted.

A total of five such sessions were held on the first day. The following day, there were just as many.

Another day later, the entire commission gathered at the editorial office. They opened the sealed envelopes containing the minutes of the Moscow and Kerch groups and compared what had been transmitted with what had been received. A rubber eraser was transmitted – a porcelain saucer was received. A lead cable tied in a knot was transmitted – a cooling radiator was received. A

a model boat was sent – a champagne cork was received, and so on. Not a single match…

"Once, an acquaintance of mine," says O. Moroz, "Galina Vladimirovna Svechnikova, brought a young woman to my office at the editorial office who, according to Galina Vladimirovna, possesses an extraordinary gift for diagnosis and is gradually beginning to master the gift of healing.

Galina Vladimirovna herself is a mathematician by training. One might think she should approach all manner of miracles with caution, yet she believes in them wholeheartedly, speaks of them with enthusiasm and tries to convert those around her to her faith.

It turned out that the woman who had come with her is a musician, a recent conservatoire graduate and now a teacher at one of the music schools. She discovered her gift quite by chance.

She accurately diagnosed one illness, then another, and now she's inundated with clients. Everyone wants to know about their ailments.

Upon entering my office, the musician fixed her gaze on me, preparing to tell me about my ailments as well, but I beat her to it, saying that I knew more than enough about them.

Actually, talented diagnosticians do exist. Mostly, of course, amongst doctors – when natural powers of observation and intuition are combined with specialist knowledge. But sometimes these natural qualities suddenly reveal themselves on their own. A person looks closely at another and notices the little details that a superficial glance misses.

It turns out, however, that this is a different case: the musician doesn't even need to look at the patient. How so? Well, it's simple. It's enough just to name the person who needs to be diagnosed.

– Take your youngest son, for example… And your wife…

– No, no, there's no need to mention your wife or

your son either! How on earth does she diagnose

the illness, then?

– I simply listen to my inner voice.

– And where does that voice come from?

– 'From there,' she says, glancing up at the ceiling. 'From outer space.'

Just like that. It often happens: you're talking to someone who, on the surface, seems quite intelligent, sensible and level-headed; it feels as though you're on the same wavelength

, and suddenly, almost in passing, they slip in something like that… And then it dawns on you: all this time, we've been attributing completely different meanings to the very same words.

Poor woman. I'm no psychiatrist. It's not my place to judge whether she's sane or not. To tell the truth, it's not at all certain that she's not. Are all fanatics necessarily sick people?

Incidentally, it turns out that her husband, also a musician, couldn't stand her daily 'cosmic communications' and left. The family fell apart. Poor woman. Our conversation has lost all meaning. We must, however, bring it to a close somehow. I suggest a little experiment;

I'll fetch a few definitively established diagnoses from a patient's medical records at a clinic somewhere, and she'll try to diagnose them herself.

– What do you need to know about patients? Their previous

illnesses? As doctors say, their medical history?

She shakes her head:

– No, that's not necessary.

– Which hospital is she in? Which ward?

– No.

– Age?

– No.

– Home address?

– No.

– What then?

– Just a surname… Initials would be fine too.

Once the visitors had left, I rang a friend – Boris Moiseyevich Shubin, an oncologist and Doctor of Science. I told him about the conversation that had just ended and asked for his help. He started swearing:

– 'You just love getting involved in all sorts of nonsense!

Still, I managed to persuade him to extract the diagnoses from ten medical records. But I couldn't persuade him to ensure they were different diagnoses: to find different diagnoses, I'd have had to search across different departments and even different hospitals. Shubin, a busy man, limited himself to his own: he handed me a sombre list of ten cancer patients. At the same time, he made me promise not to show it to a single soul (after all, he was breaking certain rules that doctors are bound to follow). The diagnoses included only

malignant tumours of the stomach and intestines. To ensure the reliability of the diagnosis, Shubin limited himself to stage four of the disease; at this stage, a mistake is highly unlikely.

I dictated the names to the musician and, about a week later, received from her a lined school exercise book containing two sheets, covered in rounded feminine handwriting in purple and red ink.

At the top was a warning:

'I will not be writing about what hurts, but about where I see the main foci of the disease.'

This was followed by the diagnoses she had made:

'A.A.'s conditions.

Acute pancreatitis. Abnormality in the thyroid gland area. Disorders of the sympathetic nervous system (solar plexus area). Gynaecology, check blood (biochemical analysis). Cardiovascular neurosis. I do not yet see any cancerous tumours.

Dr A.G.

Malignant tumour in the brain (left hemisphere). Serious disorders of the respiratory tract, metastases in the lungs. Disorders affecting the blood vessels of the thighs.

M.A.

Acute cardiovascular failure. Disturbance in the central nervous system. Disturbance in the neurohumoral regulation of vascular tone. Acute cerebral anaemia. Inflammation of the meninges (consistent with meningitis). Damage to nerve fibres (cancer).

M. S.B.

Aortitis (main abnormalities in the thoracic aorta).

Arteritis. Tendency towards high blood pressure. Inflammation of the ovaries. The right kidney is affected. Circulatory disturbance leading to blood stasis in the vessels (embolism). No cancer.

B-oh V.A.

Pain in the legs, back and heart. Episodes of depression. A disease of the lymphatic system (lymphogranulomatosis?). Chronic gastroduodenitis. 'Dyskinesia of the biliary tract'."

As we can see, these are rather convoluted diagnoses. Convoluted terminology, drawn, one must assume, from a medical encyclopaedia, or perhaps even from more authoritative sources. Yet not a single one is accurate.

– ‘How do you know?’ said Galina Vladimirovna, having glanced through the little yellow notebook. ‘Perhaps these people do in fact have the illnesses she’s identified. Perhaps they don’t even know about them themselves… And the doctors don’t know either…’

– ‘Excuse me,’ I said, ‘to write about nervous overexcitement and not mention sigmoid colon cancer, from which a person is dying. No, I’m sorry, that’s not a diagnosis.’

But you can’t change Galina Vladimirovna’s mind.

Incidentally, the sole aim of my little scheme, this experiment, is to somehow shake her belief in miracles, to instil, as they say, a healthy dose of scepticism. From time to time I resort to such tactics in our arguments. It’s a waste of time. As the old saying goes: some people want to be deceived. They positively crave it.

– Still, she does mention a few cases of cancer. In other instances, she singles out cancer: ‘I don’t see any cancer’, ‘there’s no cancer’… So, after all, something of the sort is flickering in her mind. And you want everything to be as clear as on an X-ray… As on a CT scan…

– I don’t want anything; I’m simply stating the facts: not a single match…”

PSYCHICS

Many researchers in the past, working with mediums or psychics, obtained evidence of their supernatural abilities solely because they failed to take into account factors such as sensory hypersensitivity, the involuntary reproduction of signals, and their unconscious perception by the recipient 'possessing' telepathy or clairvoyance.

The involuntary articulation of words plays an important role in the process of

'mind reading' demonstrated by many mediums. Usually, a medium attaches great importance to the conscious or unconscious reactions of séance participants to their words, gestures, hints, etc.—that is, to anything that might provide a clue to the circumstances and details of their personal lives.

Many of the experiments conducted by scientists in various countries essentially created ideal conditions for the potential use of involuntary sound signals. Even Raishet, who was by no means inclined to regard such experiments as utterly devoid of common sense, cast doubt on the findings of the Russian researcher Kotik, stating that, for the most part, the transmission of thoughts on a telepathic level was accompanied by articulation.

In 1914, Abramowski, who was at that time head of the laboratory at the Institute of Psychology in Warsaw, conducted a series of studies on telepathy, in which he acted as the sender, holding the recipient's hand. A successful result was achieved in 50 per cent of cases. Although Abramowski acknowledged the possibility that involuntary sensory signals might have influenced this result, he nevertheless attributed the success to telepathy. The main lesson to be drawn from this scientist's research is the confirmation of the existence of people possessing an exceptional ability to perceive and interpret barely perceptible and often unconscious sensory signals.

The hypothesis regarding the supernatural abilities of telepaths and clairvoyants was sharply criticised by German scientists such as Hopp, Moll and Baerwald. Moll, who possessed extensive knowledge of the organisation of parapsychological research—which attests to his genuine interest in the subject—categorically rejected any link between these phenomena and the occult. In one of his books, he pointed out that the abilities of mediums, clairvoyants and telepaths can, to a large extent, be explained by their sensory hypersensitivity.

There are several ways in which a perceiver can receive information through ordinary sensory channels. Firstly, the 'transmitter' may send signals open to interpretation, consisting of involuntary muscle twitches, which are perceived visually, aurally (!) or through touch. Telepaths performing on stage are often referred to as people who 'read' information from muscles.

People generally differ from one another in the acuity of their sensory perception. Sensory hypersensitivity is explained by a pathologically low perception threshold caused by physical factors. A higher sensitivity of nerve receptors than that typical of the average person is referred to as 'sensory hyperaesthesia'. However, this is a relatively rare phenomenon, and is therefore unlikely to be of significant importance in terms of the findings of research into extrasensory perception. Sensory hypersensitivity in telepaths and clairvoyants is often the result of training. It is not physiological but psychological factors that may play an important role: deep concentration and heightened attention. Moreover, a person with a keen mind and good powers of observation, as well as naturally acute hearing and sharp eyesight, is capable of perceiving the world around them much more broadly than their fellow human beings endowed with less perfect senses. It is worth recalling here the Australian Aborigines, who unerringly follow trails invisible to white people; the musician who can simultaneously distinguish numerous semitones in a sound; and the North American Indians with their eagle-like eyesight. None of this is the result of

hypersensitivity, but rather the result of training combined with innate abilities.

Genuine hypersensitivity implies the presence of pathological sensitivity in the sense organs. The term ‘sensory hypersensitivity’ has a broader interpretation and may refer either to an unusually acute response by the perceiver to a given stimulus, caused by psychological factors, or to an expansion of capabilities through training. Much depends here on the psychological characteristics of the individual. By no means can every person with excellent hearing or a refined sense of taste become a pianist or a tea taster.

W. James was right when he stated that the limits of human consciousness are unknown, and its potential is uncharted territory that we have yet to explore. It is well known that under hypnosis, a person’s abilities can increase significantly. They may be able to lift heavy weights, or see and hear much better than usual. This occurs because suggestion allows them to concentrate fully on the task at hand. Hypnosis sometimes makes it possible to achieve the kind of sensory abilities that occur in genuine hyperaesthesia.

Increased sensitivity is the result of extreme concentration. It can occur as a subconscious process, during which the individual feels free and at ease. Spontaneous manifestations of a high degree of sensory sensitivity are often observed among people suffering from hysteria. As for the average person, deep concentration can be of considerable help in increasing their sensitivity. If they relax their muscles, detach themselves from the world around them and focus on performing a single task—such as perceiving sensory signals—they may achieve success. Such methods mobilise all the powers of the subconscious, free from the influence of events taking place in the immediate surroundings.

Research into telepaths, clairvoyants and psychics demonstrates just how much information can be gleaned from involuntary movements and sounds, the subtle play of light and shadow, changes in facial expression, tension in the facial and neck muscles, and changes in the speed and rhythm of breathing. A gifted perceiver,

who possesses sensory hypersensitivity or is capable of deep concentration and logical reasoning, can successfully utilise all the sensory signals listed above.

Any researcher of extrasensory perception must be fully aware of the need to eliminate such sensory signals during the course of an experiment. Unfortunately, the evidence available to date suggests that most successful results are due to a disregard for this point and a lack of the necessary knowledge.

It is quite evident that all experiments on telepathy and clairvoyance must be conducted under conditions where there remains not the slightest doubt as to the absolute impossibility of the perceiver utilising involuntary sensory cues. Adherence to this rule has a significant impact on the results of work, for example, with Zener cards. The number of correct guesses can serve as a good indicator of the extent to which the influence of sensory cues has been eliminated.

To eliminate this factor entirely, the perceiver must either be placed in a light- and sound-proof room, or be situated at such a distance from the ‘transmitter’ that any communication between them is impossible.

The situation when conducting clairvoyance experiments is not as straightforward as it usually appears. For example, the subject is given the task of guessing the order of the cards in a deck contained within a closed metal box. The person placing the deck of cards in the box must not have any contact with any of the participants in the experiment who are in direct communication with the perceiver before or during the experiment.

This is dictated by the need to eliminate any possibility of unconscious transmission of sensory signals.

Let us consider the experiments conducted by Pratt and Woodruff, the aim of which was to study the influence of the novelty of the materials presented for assessment. There were 66 participants in the experiment, and 17,000 cards to be identified. A screen was used during the experiments. The experimenter held a deck of cards face down, whilst the participants named the image. In some cases, the procedure was modified slightly. In

the series of experiments, the number of guesses totalled 60,000, yielding a relatively low hit rate of 4.99. The experiments in Series A, characterised by less stringent control conditions, were more successful (a hit rate of 6.28), which was undoubtedly due to the perception of sensory signals. Any objections to this assertion would only be justified if sensory signals were not merely improbable, but absolutely impossible. What sort of impossibility can there be when the experimenter is sitting just one metre away from the subject! As for the screen, its sole purpose is merely to eliminate direct visual sensory cues. However, one must not overlook ideomotor movements, intonation, changes in breathing, and involuntary articulation, all of which the perceiver may well pick up on.

There are a number of other ways in which the perceiver can obtain information: the ability to see the card or object directly, or to guess its outline from barely discernible features, as well as the ability to touch the object or distinguish it by its smell.

Rain's early experiments on guessing Zener cards, 'as it turned out, made it possible to see the symbol depicted on the front by using a different viewing angle. Moreover, the symbols were printed so deeply that they could easily be felt on the reverse side of the card. It is hard to believe that, on the basis of these experiments, Rain not only concluded that the subjects possessed extrasensory perception, but also accused the scientific community of narrow-mindedness.

The researcher must also always bear in mind the possibility of reflection and consider only the table as its source. Slight changes in the reflection of light and shadow may convey information, particularly when there are only a few cards.

Touch is of immense importance in cases of hypersensitivity. There are people who, upon touching a card from a standard pack of playing cards, are able to identify it accurately. The tactile sensitivity of blind people is well known to many. Professor Fontan describes blind women who were able to distinguish between the colours of wool by feeling the different effects of dyes on a thread with their fingers. Professor Willy reports on a patient with

hysterical epilepsy who, by touch and in complete darkness, was also able to unerringly determine the colour of a woollen thread.

Despite the extraordinary tactile sensitivity exhibited by certain individuals, Julius Romans' book—in which he discusses paroptic perception, or so-called 'skin vision'—should hardly be taken seriously. Romans claims that this form of vision enables one to see colours and letters from a distance. Moreover, according to his claims, paroptic colour perception is possible even in the faintest light. Shovrin had previously written about a similar phenomenon, having observed it in a hysterical patient. There is no doubt that these fantastical results from the experiments by Romans and Shovrin can be explained by sensory signals which the researchers were unable to eliminate. Thus, the book *Vision Without Eyes* is a perfect illustration of a complete lack of awareness regarding the existence of such a psychological subtlety as involuntary and unconscious sensory signals.

Ideomotor movements can be broadly characterised as weak, involuntary muscle contractions caused by the presence of a dominant thought. This term was first proposed by Carpenter in 1874. Later, based on this concept, William James developed a theory regarding the capacity for volitional movement.

Ideomotor movement may result either from conscious thoughts or from thoughts of which the individual is not yet aware at that particular moment and which are linked to the subconscious. Ideomotor movement should be distinguished from psychological automatism. The latter is characterised by the fact that the thought triggering the movement usually falls outside the individual's general stream of consciousness. This is not a necessary condition for ideomotor action, which is a natural and constant accompaniment to all mental activity, particularly when emotional arousal is heightened.

The most renowned scientists to have studied ideomotor movements were the Russian and American psychologists Tarchanov and Jastrav. Research into movements of this type requires sensitive equipment. Jastrav's apparatus was fairly simple: a piece of glass was placed in a square wooden frame,

on which rested three well-polished steel balls. Another glass plate was placed on top of these, to which a recording device was connected. This ensured that any movement of the plate was recorded.

The procedure was as follows: the subject placed their fingertips on the plate supported by the three balls. It is quite clear that the plate could remain motionless for only a few seconds, especially if the subject could not see their hand, which was hidden from view by a screen. They were then instructed not to think about their hand and, at the same time, not to let it move. As long as the subject's attention was not focused on anything specific, chaotic and random movements of the hand were recorded. Focusing attention on an object in the room resulted in a jagged line appearing on the recording, pointing in its direction.

If the subject was asked to count the metronome's beats in their head or simply to follow its movements, the hand would begin to move back and forth, broadly mirroring the pendulum's oscillations. Tarchanov's experiments showed that concentrating on an object led to the appearance of images in square, triangular or circular shapes, corresponding to its dominant outline. When geometric shapes were used, this tendency became even more pronounced.

Jastrav and Tarchanov discovered that unconscious ideomotor movements are slight movements of the whole body, manifesting as random swaying. These movements can be recorded by attaching instruments to the subject's head.

Ideomotor movements are present to varying degrees in different individuals. In some people, they are extremely subtle, whilst in others they may be very pronounced.

At the end of the last century, there was a great deal of excitement in Europe and America following the enormous success of professional telepaths, who performed veritable miracles both on stage and in private experiments. However, those privy to the details of what was happening began to speak not of 'reading

’ but rather ‘muscle reading’. It was noted that if the telepath did not hold the person’s hand, place their palm on their forehead, or establish a connection with them via some object, the results did not indicate anything significant or interesting.

Nowadays, ‘muscle reading’ has become a highly lucrative profession for some people. Typically, this involves not only the interpretation of ideomotor movements, but also factors such as changes in breathing, skin reddening, shifts in areas of tension and relaxation, facial expressions, and so on.

Jastrav wrote: ‘…Changes in breathing, a rush of blood to the skin, and tremors observed when approaching the spot where an object is hidden; and the relative absence of tension when moving away from it are very valuable clues. The ‘telepath’ is, in effect, playing a game of ‘hot and cold’ with their partner. Walking in various directions to determine which one offers the least resistance is, in essence, yet another variation of the same type of game. The tense silence of the audience when success is near, and the restlessness and whispering when the wrong moves are made, are also of great significance and contribute to achieving the goal…’ Many mediums use ‘muscle reading’ as a source of information. They voice various assumptions aloud, mention people’s names and note the reactions of those taking part in the séance. In many cases, ‘reading information’ is achieved simply by observing an individual’s reaction. An important question is the ‘telepaths’ themselves’ attitude towards the method used. For example, Marion, a well-known telepath in his day, sincerely believed that all his successes were due to his ability to penetrate other people’s thoughts. Soal expressed the view that ‘the reason for this misconception lay in the fact that, over years of practice, “muscle reading” had become a subconscious process which Marion was no longer able to analyse’.

A detailed examination of the methods used in reading information from muscles is motivated by a desire to draw the attention of researchers into extrasensory perception to the need to rule out situations where the use of such aids is possible. It should also be emphasised that, in a number of cases, ideomotor movements

of the muscles of the lips, tongue and neck. Tarchanov wrote: ‘With constant repetition of the presented material (which is very often observed in experiments studying extrasensory perception), the pattern of ideomotor movements of the muscles of the speech apparatus begins to resemble more and more the articulation characteristic of the pronunciation of a very specific word. At least, this continues until the subject shifts their attention to suppressing these movements.’ Furthermore, Tarchanov emphasised that ideomotor movements of the aforementioned muscles may arise not only as a consequence of observing a real object, but also as a result of its constant reproduction in our imagination.

Soal expressed a similar view when commenting on Rain’s experiments: ‘None of the experiments can be considered of any significance if the perceiver is able to see any part of the “transmitter’s” body. Where the choice is made from a small number of figures (five or six), and the perceiver and the “transmitter” work together for a prolonged period of time, a system of signs may emerge that arises at an unconscious level.’

Abramowski, a staunch advocate of telepathy, wrote that unconscious muscle movements could serve as a source of information regarding the number of syllables in a word, stress, rhythm, and so on. It is interesting to note that, more than half a century ago, Thomas attributed the successful results of his research to the recipient’s keen hearing and their ability to interpret the sounds made by a pen or pencil when writing the first letter of a word denoting a particular symbol, for the purpose of further verifying the data.

There is no doubt that modern methods of studying extrasensory perception, for the most part, rule out the possibility of sensory signals being transmitted. However, the researcher must be fully aware that a gifted perceiver can easily use ideomotor movements as a cue, enabling them to guess any symbol, object or image repeatedly presented to them for ‘identification’ during experiments.

The first experiments into unconscious articulation (involuntary whispering) were conducted by Lehmann and Hansen, who sought to determine whether any artificial factors might influence the results of telepathic contact. They placed two

concave mirrors facing each other. The distance between the focal points was 2 metres. The researchers then sat with their backs to each other so that their heads were level with the focal points of the mirrors. They attempted to transmit numbers from 10 to 99, which were depicted on randomly selected at random cards. After a short a while a clear a strong desire to saying about the number being conveyed number For order to to the possibility hearing half-spoken words the transmitter applied his mouth, whilst the receiver placed their ear against the focal point of the mirror situated opposite. At the same time, the transmitter took great care to ensure that his lips did not move and that his mouth was tightly closed. However, his tongue and vocal cords were free to move, as if he were pronouncing a number aloud. Soon, the experimenters had no doubt that this rudimentary vocalisation had a huge impact on the results of the telepathic transmission. Out of 500 experiments, correct or nearly correct numbers were named in 74.4 per cent of cases. Negative results accounted for 25.6 per cent. Thus, the scientists concluded to conclusion that the movements of the vocal apparatus are an inevitable accompaniment to the thought process. It is precisely this fact that led many proponents behaviourism to regard the thought process as ‘silent speech’.

When analysing these results, one must certainly bear in mind the fact that the participants deliberately repeated the numbers being conveyed to themselves. It is precisely this circumstance that has led to a critical view of their study. However, if the researchers had used not 90 digits but just 5, positive results would have been observed not in 74 per cent but in approximately 90 per cent of cases. Since Zener cards feature images of only five symbols, one can imagine the significant role that involuntary articulation or other forms of sensory signals begin to play here.

The terms ‘involuntary whispering’ or ‘unconscious articulation’ are unfortunate and do not adequately capture the essence of what is happening. A more appropriate concept here is that of endophasic innervation. When a person is deeply focused on the object of their thoughts, this can result in involuntary whispering and even quite loud verbalisation, which the individual is not even aware of.

In light of the above, it must be emphasised once again that telepathy experiments must be designed in such a way as to completely rule out the possibility of the recipient picking up any sensory signals, including unconscious articulation. This inevitably leads to the conclusion that a good ‘transmitter’ of thoughts is, first and foremost, a person with a highly reactive endophasic innervation system. As for the ‘receiver’, everything here depends on the acuity of his or her hearing.

Ilga K., a nine-year-old girl from a peasant family, who only really began to speak at the age of eight. Whilst attending primary school, she soon began to recognise individual letters, but was unable to read not only words but even simple syllables. After some time, her teacher noticed that if he stood next to her and looked at a book, she would read any text, including one in a foreign language. Whenever her teacher or mother concentrated on solving an arithmetic problem – problems she was completely unable to solve on her own, even the simplest ones – the girl would give the correct answer without hesitation. Ilga’s mother also complained that she could not hide anything from her child, who would unerringly guess where a hidden object was. Was Ilga a telepath? Professor Newreiter and his colleagues attempted to answer this question.

The role of the sender in the experiment was assigned to the girl’s mother. Ilga successfully ‘solved’ problems and ‘read’ texts not only in Lithuanian, but also in German, French, English and Latin. It was noted that errors in pronunciation corresponded to her mother’s level of education. Ilga did not need to look at the book. It seemed as though she was simply reading minds. The scientist concluded that the only explanation was the girl’s genuine telepathic abilities, as stated in the official report.

In 1936–1937, another series of experiments was conducted under the supervision of Professor Dali, the rector of the Institute of Psychology at the University of Riga. The researchers concluded that Ilga’s abilities could be explained by her hyperacute hearing and the sensory signals she received from her mother and teacher.

The commission, headed by Professor Dali, had the necessary equipment and qualified staff, which included a specialist in phonetics and an expert capable of reading information from lip movements. The phonetician noted that the sound with which the next syllable began always appeared at the end of a word spoken by her mother to encourage or cheer the girl on.

This was precisely why Ilga would say the whole word at once, whilst repeating the syllables that made it up separately. Moreover, the expert could easily read the words from the mother's lip movements whilst observing her through the window of a soundproof chamber. This once again confirmed Lehmann and Hansen's view that individuals with hyperacusia can easily pick up articulated sounds where an ordinary person is unable to hear them.

It was noted that the volume of the articulated sounds increased as the distance between the mother and the girl grew. In a number of cases, they were so pronounced that the observers detected them before the girl did.

Nevertheless, it must be acknowledged that Ilga possessed phenomenal acute hearing. She was able to identify, by the sound of breathing, the sound with which a syllable began. The person who contributed to the development of this remarkable ability in a mentally disabled child was her teacher, as the experiments showed that reading a text alongside the girl was accompanied by her unconsciously repeating it aloud in a whisper.

Thus, researchers established the significance of auditory signals in the Ilga K. phenomenon, which can be compared to a musical instrument tuner capable of reproducing, by ear, dissonances inaudible to the average person. The fact that some individuals can distinguish and interpret auditory signals that cannot be reproduced by the observer or are devoid of any meaning to them is likely the reason for the incorrect assessment of the results of experiments on extrasensory perception.

In 1938, an article by Drake was published in the journal *Parapsychology*, describing a phenomenon similar to that of Ilga K. It concerned a mentally disabled boy who had suffered a brain injury at birth. At the age of 11, he was practically unable to walk, could not concentrate on anything for

for any length of time, had a poor memory and lagged far behind other children in his development. Like Ilga, the boy could read text in his mother's presence and guess all her thoughts. The attribution of telepathic abilities to him is primarily due to the poor design of the experiment. With a more rigorous approach, the scientists would probably have obtained exactly the same results as the experimenters who studied Ilga K. Undoubtedly, it is interesting that hyperacute hearing and rapid verbal responses were observed in mentally retarded children. In this regard, an interesting analogy can be drawn: many children capable of instantly solving complex mathematical problems in their heads lag significantly behind in other areas of development.

Researchers often refer to the experiments on telepathy conducted by the world-renowned scientist, Professor Gilbert Murray. It is curious, however, that in doing so they ignore his own views on the matter. Here are the words recorded during a conversation with him: 'Professor Murray himself does not believe in the possibility of telepathy… He believes that he simply enters a special state characterised by heightened sensitivity to noise, when his hearing becomes so acute that he hears, so to speak, snippets of conversation from people preparing for the experiment and discussing what they are going to think about. However, Murray does not distinguish individual words, but picks up the general idea by ear.' Takett believed that 'when studying telepathy, one must always bear in mind a very important point: sensory perceptions can influence consciousness even when they are perceived unconsciously. In other words, the subconscious is capable of influencing consciousness.'

The most misleading results come from experiments on extrasensory perception in which sensory signals, involuntarily transmitted by one participant, are unconsciously perceived by a recipient with hyperacute hearing. The risk of misinterpretation increases given that observers with normal hearing are unlikely to be able to detect such 'interaction' between the participants in the experiment.

Psychological characteristics of sensory hypersensitivity have not yet been fully studied. Despite

the availability of certain instruments, they do not allow for an adequate assessment of the subject's emotional or mental state at any given moment. Hyperprosexia, characterised as an extremely high degree of focused attention, is often the key element underlying sensory hypersensitivity. It becomes particularly significant when combined with the ability for selective perception, which may be either the result of training or an innate gift.

Phono- and acumetry make it possible to determine the intensity of a sensory stimulus required to elicit a conscious response to it. Where unconscious responses are concerned, their application is extremely limited. When studying extrasensory perception, the main task is not to identify the dominant psychological factors underlying hyperacusia. What is required is an assessment of: a) the degree to which various noises reaching the perceiver's ear simultaneously can be distinguished; b) the ability to isolate a specific sound necessary for obtaining the required information. Undoubtedly, such an assessment can only be indirect.

It can be said that hyperacusia depends on the following four factors: perception, differentiation, recognition and interpretation, any or all of which may occur at an unconscious level; these, in turn, are closely linked to mental alertness, the degree of concentration achieved, and the ability to filter out irrelevant sensory stimuli.

Taking all the above considerations into account, it may be surmised that the successful performance of the perceiver can be explained not by actual acute hearing, but by a natural or acquired ability to distinguish barely perceptible sounds and movements—which carry the necessary information—from the totality of sensory stimuli.

The potential for auditory development can be demonstrated by the example of blind people, who are capable of perceiving noises and sounds that are inaccessible to people with normal vision. The ability to sense objects and obstacles, whilst entirely explainable in terms of normal psychology, has nevertheless given rise to the myth of the 'sixth sense'. In many cases, both in the distant past and in our

, blind people have been held in special esteem, a status attributed to the mystical qualities ascribed to them. These qualities were supposedly manifested in the ability not only to sense their immediate surroundings, but also to perceive information about distant objects relating to the past, present or future.

However, it should be emphasised that by no means all blind people can sense obstacles in advance. Among those who possess this ability, it manifests itself to varying degrees. A person encountering the phenomenon of perceiving objects located at a considerable distance for the first time will undoubtedly experience a sense of profound amazement.

The claim that blind people 'see' with their skin is false; their ability is primarily due to their well-developed sense of hearing. Other contributing factors include their ability to interpret changes in temperature, wind direction and strength, as well as a heightened sense of smell and sensitivity to vibrations. Willie compares the abilities of blind people to those of a bat, which is able to navigate in the dark using its hearing. As with a bat, blind people's perception of objects disappears when their ear canals are completely blocked. One of the main reasons for the belief in a 'sixth sense' is the fact that, for blind people, all sensations received through hearing are localised in the forehead region. Kunz pointed out that most of them unconsciously turn their forehead towards the object whose location they wish to determine. This interesting phenomenon is explained by the fact that the forehead is situated almost exactly between the ears, which are the actual organs of sensory perception. In this regard, Willy, who is blind himself, writes: 'The localisation of sensations is so distinct that many blind people refuse to accept the hypothesis that they are illusory. The following experiment demonstrates that this is, after all, an illusion: I placed a board 70 cm from my forehead without experiencing any sensations. Concentrating my attention yielded nothing. I could not feel the board. I then began to stroke my thumb with my index finger, making a slight noise as I did so. A sensation of the board being situated nearby immediately appeared in the forehead region. When I moved my fingers silently, the sensation was absent.'

Sensory hallucinations are caused by a number of factors: the fear of injuring one's face by bumping into an object; the traditional belief amongst blind people that the forehead is the centre of the 'sixth sense'; and its anatomical position between the actual sense organs – the ears. If a blind child had known the true state of affairs from early childhood and had not been exposed to false information, then all such sensations in the forehead region would probably not have occurred. Similar sensations can also be induced in sighted people by bringing a sharp object or a needle close to the forehead without actually touching the skin. The anticipation of a prick causes sensations in the area most likely to be affected.

READING WITH THE HANDS

A few years ago, O. Moroz recounts, the editorial office of 'Literary Gazette' received a letter:

'Recently, one has been hearing quite often about mysterious phenomena of the human psyche. Lectures and public demonstrations are devoted to them. In particular, there is much talk of 'skin vision' – the idea that some people are able to distinguish colours, images and so on using their fingers. But surely, if such facts exist, they ought to form the basis for broad scientific generalisations. Yet neither I nor anyone I have spoken to is aware of anything of the sort. V. Forafonov. Moscow."

Indeed, once certain previously unknown facts have been established, it is legitimate to discuss their scientific interpretation. The reader's concern for science is commendable. But here is the question: has the fact of 'skin vision' been reliably established? Judging by newspaper articles that frequently appeared in those years, skin vision manifested itself most strikingly (and, it seems, for the first time) in Roza Kuleshova, a resident of Nizhny Tagil. We invited her to the editorial office.

The few days she spent as our guest proved to be rather troublesome. Our guest's behaviour was unmanageable. She flitted about the editorial floors in a state of euphoria at her fame and the universal attention she was receiving, demonstrating her abilities everywhere she went. Here and there she could be seen in a crowd of staff members, holding Zener cards or postcards in her hands. Turning away, she would unerringly name the figures on the cards and describe the images on the postcards. In the editorial canteen, Kuleshova might dart up to a staff member standing in the queue and, without being asked, tell him the colour of that… part of his outfit hidden by his outer clothing. She burst into the editor-in-chief's office, threw some book onto the floor, kicked off a shoe and began to read the text, tracing it with her foot…

Those days were long remembered in the editorial office.

We decided to carry out the same experiment with Kuleshova as we had with the 'telepaths'. With her, however, it proved incomparably

difficult. She struggled to understand what was expected of her. She chattered incessantly, offering to demonstrate fantastical feats.

We, however, were aiming for something modest. We took a sheet of plywood one and a half metres wide and the same height, cut a hole in it for her arm, and attached a sleeve made of black, opaque fabric to it, much like is done in photographic laboratories. We placed this sheet in front of Kuleshova; she would slip her hand into the sleeve and feel objects of different colours – pencils and buttons – which we gave her. The sleeve fitted snugly around her hand, whilst the plywood blocked her field of vision, making it impossible to peek.

It had been agreed in advance that the experiment would be considered a success if Kuleshova correctly identified the colour in more than half the cases: half of the correct answers could be attributed to mere chance. Several series of such experiments were carried out. The best result was seven correct answers out of eighteen.

They then made the task more difficult. Kuleshova was given postcards featuring reproductions of paintings, similar to those she had described without looking in the editorial corridors and offices. The result was zero. Regarding Deren's *Portrait of a Girl in Black*, she said: 'It looks like flowers'; regarding Van Dyck's *Self-Portrait* – 'Different flowers'; regarding
Gauguin's *Women by the Sea* – simply 'flowers'… She said nothing at all about some of the postcards.

Then the sheet of plywood was removed and Kuleshova was given a simple black blindfold, the sort she usually wore during her public performances. Everything changed. In every instance, her answers were accurate and detailed: she correctly identified the colours of the objects, meticulously described the details of the paintings on the postcards, and read the text fluently.

The test subject, who had been looking rather downcast, perked up again and resumed pestering the experimenters with her unbridled temperament. This was a control experiment. It was clear that the blindfold did not prevent her from peeking at all.

Finally, it was decided to repeat the experiments that had been reported in the newspapers and which had brought Kuleshova fame. The experiments with coloured beams.

A beam of a single colour is emitted from a device resembling a child's diascope. The subject holds their hand up to the eyepiece and identifies the colour of the beam by touch. The newspapers reported that in one experiment, Kuleshova 'correctly identified all seventeen of the colours presented'. Other experiments were almost as successful. Only one was regarded as relatively unsuccessful – when, out of sixty-four attempts, she gave the correct answer in fifty-four cases.

Before beginning the experiment, we examine the apparatus. Click… Click… Click… The clicks of the switch when setting different colours are not identical; they differ slightly. A keen ear can pick this up.

To rule out the possibility of eavesdropping, we ask that another identical device be brought in. Now the experimenters will click the switches on both devices simultaneously, but setting them to different positions. An opaque veil is draped over Kuleshova's head. Plates of four colours are inserted into the working device. Four colours – that is Kuleshova's choice. The experiment begins.

According to the draw, the yellow colour is to be switched on first. Two simultaneous clicks are heard. 'Blue,' says Kuleshova. The yellow colour is switched on again. 'Blue,' comes the reply. Now it really is blue. 'Blue.' Correct. Blue for the second time.

'Yellow.' Green. 'Red'… Two

correct answers out of ten.

– Phew, I can't do this. It's hot,' says the test subject, wiping her face with a handkerchief. 'It's so stuffy in here!

It really is stuffy. It's warm outside. And here there's the black cover, plus the heat from the machine.

– 'Perhaps we should use three colours instead of four?' says someone, taking pity on Kuleshova.

In the experiment with three colours, Kuleshova gave eight correct answers out of twenty. That's slightly better, but still not much to write home about. Basically, it's all within the range of random guesses. Or barely exceeds that number.

Now, however, the conditions of the experiment are simplified: instead of a bedspread, she wears a blindfold, and the second, distracting click is omitted. A 100 per cent success rate. You might as well rush off and write an effusive article.

‘…At present, no cutaneous-optical sensation has been detected in R.A. Kuleshova,’ stated the conclusion of the commission
of *Literaturnaya Gazeta*, which comprised five eminent scientists from various disciplines. ‘But does “skin vision” even exist at all? … The sheer number of “successful” experiments and the number of publications are not, in themselves, convincing. A thorough analysis of the experimental conditions and their results is required.’

The editorial office of *Literaturnaya Gazeta* is located on Tsvetnoy Boulevard in Moscow, directly opposite the old circus. We asked Kuleshova to stay on for another day and, without any of the experimental rigours, to demonstrate what she could do. We invited well-known illusionists from the circus, including Émile Kio. They watched intently. Towards the end, Kio said that, in his opinion, everything she had shown belonged to the circus genre.

Needless to say, it was no trouble at all for Rosa Kuleshova to fool unsuspecting people. Which is exactly what she did. People still talk about it to this day. I.F. Korneev, a Muscovite, sent a letter to the editorial office in which he recounted his chance encounter with Kuleshova. It would appear that this encounter took place shortly after the
by *Literaturnaya Gazeta*, in which Kuleshova’s abilities were being tested. Or perhaps even whilst the experiment was taking place, between two meetings between the subject and the panel of experts. I.F. Korneev was serving in the police at the time (he is now retired).

“Once, together with my colleague from the Ministry of Internal Affairs, Colonel A.I. Titov,” writes I.F. Korneev, “I found myself in a storeroom at one of the departments of the Central Department Store (TsUM). About 15 minutes after we arrived, a woman entered – or, to be more precise, rushed in – who appeared to be aged 32–35, of below-average height, and dressed in an old brown mid-season coat. Cursing at the top of her voice about some academics and professors she had allegedly just met, the woman, noticing our puzzled looks, introduced herself:

– Roza Kuleshova. ‘That’s what they’re writing about me in the papers. And now I’ve had a complete falling-out with the scientists,’ she continued. ‘I’m proving to them and showing them what I can do, but they just keep insisting that it can’t be true. But tomorrow I’ll prove them wrong, and if they don’t understand, I’ll go back to the Urals, join the circus and show them what I’m capable of.’

‘So you don’t believe me either,’ she said, turning to us. ‘Then blindfold me.’

I asked for a jacket to be brought from the shelf (it turned out to be green) and, in the presence of eight or ten women and my colleague, I tied the sleeves tightly around her head and pulled the rest of the jacket down to her waist. This left her with something like a sack over her head. Then the most interesting part began. I took out my service ID and held it up to Kuleshova’s outstretched hand. Running her hand over it, she read the text briskly, correctly naming my rank, position and all the other details. Then the jumper was untied.

– ‘Well then, police, don’t you believe me either? Go on, tie it up again.’

I blindfolded her again, much to the surprise of those present. Rosa read out all the details on A.I. Titov’s identity card. It’s worth noting that the text on the card is written in such small print that not even someone with normal eyesight could read it straight away, let alone from an outstretched arm’s length.

Getting carried away, amidst the surprised smiles and sighs of those present, I blindfolded her another five or six times, handing her various documents to read – delivery notes, invoices. And whilst she was reading these documents, I would discreetly hold a folder of papers up to Kuleshova’s waist, positioning it like a screen. But this screen didn’t help either, at least not for us. She wasn’t peeking, but she read and read and kept saying:

– ‘I can see you’re just like those academics… But what can you expect from the police?

She doesn’t trust a soul.

Then, as she was leaving, she performed a few magic tricks, improvised some verses about the Soviet police, and left, promising to come back the next day and tell us about her second meeting with the scientists.

Once she’d gone, we spent a long time discussing what we’d seen, asking one another: ‘Hasn’t this Rosa played a trick on all of you?’ To check, we took turns blindfolding one another with the same jumper, but each of us saw nothing but complete darkness.

Having agreed that Kuleshova did, after all, ‘see’ with her hands, we went our separate ways. Afterwards, each of us spent a long time telling many people about what we’d seen, asserting to our listeners the ‘phenomenon’ of Roza Kuleshova.”

I.F. Korneev described Roza Kuleshova with remarkable accuracy. How typical of her – this eccentricity, this tirade against non-believing scientists, this constant readiness to demonstrate her abilities to anyone and everyone, these little verses about the police…

The most amusing thing, however, is that I.F. Korneev fails to notice how he contradicts himself, his own confident assertion that ‘she did not peek’. The phrase:

‘You, I see, are just like those academics… But what can you expect from the police – they don’t trust anyone’’, Kuleshova says precisely at the moment when I.F. Korneev is trying to place a screen between her eyes and the text she is reading. It follows, then, that she can at least see the screen. It is another matter that it does not bother her; she knows how to cope with such distractions.

Recently, a journalist criticised *Literary Gazette* for failing to take an objective approach to the ‘Rosa Kuleshova phenomenon’. Apparently, scientists have now scientifically substantiated this phenomenon.

Well, firstly, where exactly is the lack of objectivity? We carried out an experiment and published its results – just as it happened. Secondly, what exactly have scientists now substantiated? They have substantiated the fundamental possibility of distinguishing black from white and light from dark by touch, as well as recognising simple geometric shapes (Zener cards) and capital letters…

In the laboratory of the Institute of Radio Engineering and Electronics, headed by Eduard Emmanuilovich Godik, there is a video recording of one of the experiments, illustrating the essence of the phenomenon. On the screen, against a white background, a sort of blurry spot is visible. But as a hand approaches it, the outlines of letters become distinguishable. The hand moves closer, and the inscription becomes clearly visible: the headline of the newspaper *Pravda*. The hand moves on, and the word turns back into an indistinguishable spot.

The explanation is simple: the hand emits thermal rays, which are reflected off the paper over which the hand is moving; naturally, they are reflected differently from the white surface than from the black ink of the letters. The reflected rays are detected by the sensors of the thermal imaging device. Their sensitivity is no greater than that of the hand – hence the conclusion that the hand can ‘see’ the same thing that
the thermal imager ‘sees’.

Admittedly, much remains unclear here. It is unclear whether thermal sensations can coalesce into an image, or how complex an image can

be perceived in this way… But all these uncertainties are of a completely different nature from those that arose in the past during discussions of ‘skin vision’. Back then, it was all a complete fog, a juggling of pseudo-scientific terms.

Guessing what image you have at hand, taking into account barely perceptible differences in temperature, is roughly the same as identifying an image on a bas-relief by touch. Although the former is, it would seem, more difficult. People’s ability to ‘see’ by touch varies. It is well known that blind people possess this ability to a high degree. Presumably, the ability to detect differences in temperature and to deduce what these differences imply also varies from person to person.

Thus, the fundamental possibility of perception through thermal localisation is now ‘scientifically substantiated’. But no one has ever actually proved that it was precisely this ability that R. Kuleshova possessed. On the other hand, it has been reliably demonstrated – in particular, in the experiment conducted by *Literaturnaya Gazeta* – that she was peeking through the blindfold, just as magicians have done since time immemorial. So much for the ‘Rosa Kuleshova phenomenon’!

Why, then, was there such a fuss, if it turns out that ‘skin vision’ is, in principle, possible? It was worth the argument. Firstly, I repeat, only the possibility of this kind of perception has been proven. It is unclear, however, whether it actually manifests in reality. And if it does – to what extent. Secondly, so much nonsense has been spouted about ‘skin vision’, just as with other similar phenomena. People who supposedly possessed it were almost elevated to the status of saints…

Even now, this trail of nonsense still follows it. It will continue for a long time to come. Recently, the *Proceedings of the Academy of Sciences* rejected an article by Gulyayev and Godik, which set out the results of thermal localisation. The arguments given were: given the unhealthy interest… and out of concern for the journal’s good name…

This morbid interest in ‘skin vision’ is indistinguishable from the interest in telepathy, telekinesis and other such phenomena[2] .

Above all, this interest is fuelled by a desire to push these ‘phenomena’ beyond the bounds of science. Yet at the same time, to speak in the name of science. A thirst to establish some new science that would also encompass mysticism.

So, ultimately, the incorporation of ‘phenomena’ into ordinary (the only) science is a blow to mysticism.

Not long ago, I received a letter from Sverdlovsk. It described how the ‘Rosa Kuleshova phenomenon’ came about (a very important detail, since usually all these ‘phenomena’ fall on the public’s heads like ripe apples. Rarely does anyone know where they ‘came from’).

‘I am a neurologist by profession,’ the letter stated. ‘For many years I was head of the neurology department at the 1st City Hospital in Nizhny Tagil. I had known Roza Kuleshova since she was 14 as a patient (she suffered from cerebral arachnoiditis with epileptic seizures and hysterical traits). She had already taken up magic tricks at that age and would sometimes perform them for me. But my professional interests were focused mainly on seriously ill patients. (Incidentally, quite recently, during a discussion at a certain gathering of physicists’ papers on thermal localisation, when the conversation turned once again to Roza Kuleshova, one of the participants unexpectedly declared: ‘She certainly did not possess “skin vision”. ‘Everything she did, she did through telepathy.’) Besides… I’ve never been fond of parapsychology.

But then a retired military doctor, I.M. Goldberg, joined our team; he, on the other hand, was very fascinated by parapsychological issues. One day, Rosa Kuleshova came to see him and demonstrated that, whilst blindfolded, she could read and identify the colours of objects. He was thrilled and put Rosa Kuleshova through her paces on the medical examination bench. The sensation knew no bounds!

This sensation then took two paths: externally – through the Department of Psychology at the Nizhny Tagil Pedagogical Institute, spreading throughout the Soviet Union and even beyond its borders; and internally – when Clara Fyodorovna Selishcheva, a surgeon at our hospital (who now lives in Dniprodzerzhynsk, Dnipropetrovsk Oblast), very soon replicated all of Roza’s ‘miracles’ whilst blindfolded, with the difference that she stated outright: she could see perfectly well through the slits near the inner corners of her eyes. By carefully shielding Roza Kuleshova’s eyes, she deprived her of all ‘miraculous’ abilities. Roza Kuleshova also lost her ‘magical’ qualities during other experiments we conducted, in which her eyes were reliably shielded from her hands. Thus, in Nizhny Tagil, we completely debunked the ‘phenomenon’ of Roza Kuleshova. Our conclusions fully

coincide with the conclusions of the *Literaturnaya Gazeta* commission that investigated Roza Kuleshova.

The purpose of this letter to you is to confirm, so to speak ‘at the source’, the scientific untenability of the ‘Roza Kuleshova phenomenon’, or rather, simply her lack of the so-called
‘cutaneous-optical sense’.

Yours
sincerely,
A.S.
Rubakha”.

As we can see, even at the very moment of the ‘phenomenon’s’ birth, there were level-headed people who took a sober look at the whole matter and explained everything thoroughly. Thank you to them.

Nevertheless, this did not prevent the little bird from fluttering out of the nest and beginning to flit about the wide world (for which we must be grateful to Comrade Goldberg and the psychologists from the Nizhny Tagil Pedagogical Institute).

The fact that the Kuleshov effect is a trick has been demonstrated countless times, but the thirst for a miracle was so great that people turned a blind eye to it.

It is precisely this fact that we must bear in mind: sooner or later, a sober scientific approach will, of course, prevail; however, the opposite approach often enjoys temporary success in ‘local’ disputes: it is all too common for rigorous scientific data to be simply disregarded – the average person has their own ‘science’, their own view of the world; they see in it what they want to see, rather than what is actually there.

ABBREVIATION

Basic rules of Method No. 1

1. To avoid whispering the words aloud or pronouncing them mentally whilst reading, you should clench your teeth more tightly and repeat to yourself
'one, two, three, etc.'

2. Let your eyes follow the page from top to bottom as you read, rather than from left to right.

3. Take in a group of words at a glance, rather than just one or two words, as you are doing whilst reading this page right now.

4. Do not pause or look back at sections of text you have already read.

5. Train your peripheral vision by trying to take in as many words as possible at a glance.

6. Practise more often. When walking down the street, try to take in the number plates of passing cars, advertising and so on with a single glance.

Key rules of Method No. 2

1. Train for 30–40 minutes every day.

2. Read without regressions, i.e. avoid looking back
eyes.

3. Read according to the integral
algorithm (') for
developing reading skills, which involves a specific sequence of rational actions in accordance with the blocks of the algorithm from the first to the last. There are a total of 7 blocks of integrated reading (books, articles): 1) author; 2) source and its details; 3) problem; 4) factual information; 5) characteristics of the material presented; 6) critique; 7) the novelty of the material presented and its potential for practical application. It is essential to memorise all the blocks of the algorithm thoroughly and not to forget them whilst reading.

4. Develop the ability to extract the differential reading algorithm, i.e. keywords – semantic sequences – the dominant themes or meanings of the text's semantic content. (An algorithm is a set of actions or a series of specific operations with a precise indication of their

sequence from start to finish; it is called ‘integral’ because its effect extends to the text as a whole.)

5. To eliminate articulation whilst reading a text (whispering words aloud, mentally pronouncing words) and to minimise internal speech as much as possible (this manifests as short bursts of keywords and semantic sequences that adequately reflect the meaning of the text).

To this end, the ‘Tapping the Rhythm’ exercise is recommended for repeated practice.

The essence of the exercise is as follows: whilst reading any text silently, you tap out a rhythm with your hand that does not correspond to the usual rhythm of Russian speech. It consists of a two-beat tap with four stressed elements in the first beat and two in the second, with a significantly stronger emphasis on the first element of each beat.

It is sufficient to read for 20 hours whilst tapping out this rhythm for a new brain processing pattern to develop and consolidate, forming a new stereotyped code that enables the processing of information entering the brain via the visual channel without vocalisation. To tap out the rhythm, hold a pencil between three fingers of your right hand and tap it on the table – firmly, confidently and clearly. Tap the rhythm using the whole arm, not just the hand. When reading whilst tapping out the rhythm, the key is to ensure the rhythm is continuous and regular. At first, reading whilst tapping out the rhythm proceeds very slowly and without understanding what has been read. Over the course of a week, it is recommended to read simple texts in this way for 1–1.5 hours daily. Keep the rhythm in mind at all times and tap it out before going to sleep. Improvement in speed reading will follow this pattern:

1- Phase 1 of training (8–10 hours) × = V

2- Phase 1 of training (up to 10 hours) T = VPhase 2 of training T V = P

3- Phase I of training: T V P = 3

4- Training phase (up to 100 hours) R C C 3

Where R – reading; T – tapping out the rhythm; C – comprehension; 3 – memorisation.

Your aim is to ensure that your reading speed whilst tapping out the rhythm is equal to your normal reading speed. A positive outcome of mastering the rhythm-tapping exercise

is the development of vivid, visual imagery whilst reading.

6. Develop peripheral vision. To do this, 8 Schulte charts are used. Each chart consists of a 20 × 20 cm square divided into 25 cells, with numbers from 1 to 25 written in the cells in random order:

15	6	16	9
1	8	20	24
18	22	10	21
17	11	23	5
7	4	13	19

The remaining 7 charts are drawn up in the same way, with the sole difference being that the arrangement of the numbers in the squares varies.

The task is to locate each number from 1 to 25 on the chart as quickly as possible.

The rules for working with the grids are as follows. All 8 grids must be used for training. Before starting work on a grid, you must fix your gaze on its centre so that you can see the entire grid. When searching for consecutive numbers, you are only permitted to fix your gaze on the centre of the grid; horizontal eye movements are not allowed. The distance between the chart and your eyes should be the same as when reading ordinary text, i.e. approximately 25–30 cm.

You must locate the numbers by counting silently (i.e. to yourself) in ascending order from 1 to 25 (or in another specified order). The numbers found are indicated only with the eyes (to do this, hold the chart with both hands at a slight angle). As a result of the training, reading a single chart should take 25 seconds or less.

7. Learn to read whilst moving your eyes vertically: fix your gaze on key words and meaningful groups of words.

The ‘Storming Method’ exercise is highly effective for mastering speed reading.

The exercise is based on creating a time-pressured situation where you have just 15 seconds to read a single page of a book. During this time, you must actually read the text, rather than merely skimming it.

The rules for carrying out the exercise are as follows. Prepare 10–12 books measuring 140 × 200 mm, each containing 50–100 pages. In the first two or three books, mark them out in advance: using a soft pencil, draw barely visible lines from top to bottom down the centre of each page. Time the duration taken to read each page (15 seconds) using a stopwatch. You can manage without a stopwatch: read 100 pages in 25 minutes. The key to this method of reading is to ensure your eyes move strictly vertically down the centre of the page, taking in the entire text area. Fixing your gaze (stopping your eyes) and partially horizontal movements are permissible, but only in areas with the highest density of information. You are not yet required to fully understand and absorb what you have read whilst practising this method. Read each of the selected books from start to finish without a break. Once you have finished reading, write down the most interesting events, facts and phenomena that you have remembered.

Using the ‘brainstorming method’, it is recommended that you read one book of 50–100 pages every day.

The sample plan set out in the table below will help you master the speed-reading technique:

Наименование этапа	Продолжительность	Ожидаемая скорость чтения, знаков в 1 мин.
Ознакомление и изучение правил быстрого чтения, освоение аутогенной тренировки	20 дней по 1 ч	630
Чтение без регрессии	10 дней по 40 мин	800
Интегральный алгоритм чтения	14 дней по 40 мин	1200
Дифференциальный алгоритм	15 дней по 40 мин	2000
Избавление от артикуляции	14 дней по 40 мин	1500
Движение глаз при чтении	14 дней по 40 мин	2000
Усиление внимания при чтении и последующие тренировки	100 дней по 40 мин	До 3500

During your sessions, it is advisable to use self-suggestion formulas whilst in a state of autogenic immersion.

The table below lists the self-suggestion formulas recommended for mastering the speed-reading technique:

Наименование этапа	Формулы самовнушения
Чтение без регрессий	"Мне легко читать быстро. Я справляюсь. Я читаю без регрессий".
Интегральный алгоритм	"Мне легко читать быстро. Я справляюсь.Постоянно помню 7 блоков интегрального алгоритма чтения. Вижу свой зрительный образ алгоритма" (повторить содержание всех 7 блоков алгоритма)
Дифференциальный алгоритм чтения Избавление от артикуляции	"Я читаю быстро. Сразу нахожу в тексте его доминанту. Излагаю ее своими словами" "Я читаю быстро. У меня нет артикуляции. Я запоминаю прием для ее подавления.Я буду помнить его всегда" простучать
Движение глаз при чтении	"Я читаю все быстрее и быстрее. Поле моего зрения постоянно расширяется. Я вижу всю страницу, весь текст сразу". "Я читаю быстро. Глаза легко и свободно скользят по тексту только вертикально.Мне очень приятно так читать"
При дальнейших тренировках	"Я читаю удивительно быстро. Я всегда внимателен. Сосредоточен. Мое внимание подчиняется мне"."Я читаю удивительно быстро. У меня отличная память. Все нужное запоминается само собой без всяких усилий". "Я умею быстро читать. Я буду быстро читать всегда. Постоянно помню все правила быстрого чтения" (повторить все правила)

It is advisable to carry out all sessions and exercises for mastering speed reading at the same time each day. Your workspace should be well and evenly lit. Keep the table clear of any unnecessary items.

It is strongly recommended that you spend most of your reading time standing, placing the book on an inclined surface such as a desk or counter.

When reading, it is advisable to take breaks from time to time to give your eyes a rest.

During the first year, it is recommended to do one training session per month, lasting one week, with 1–2 hours of practice each day.

Weekly exercise programme

For the first two days, spend 1–1.5 hours reading various texts whilst tapping out the rhythm.

After finishing each text, summarise what you have read, forming blocks of the integrated reading algorithm and the dominant pattern.

On the next two days, spend 25–30 minutes working with the Schulte tables. Read 1–2 books daily using the ‘speed-reading method’. On the final two days, carry out exercises to train your attention.

On the final, seventh day, to assess the effectiveness of the sessions, it is recommended that you read 6 newspapers, 3 popular science magazines and 150–300 pages of any text (three times the daily norm). Your ability to complete this task will demonstrate the success of your training.

At the start of your training, you will be able to grasp the content of the texts. However, after 6–8 months of persistent training, your reading speed will increase by 2.5–3 times and your comprehension of the text will be roughly the same as when reading normally. It is advisable to note down how long it takes you to read 2–3 pages and to compare the results at the end of each month.

REVERSE

Werewolves are demonic figures in the mythology and beliefs of many peoples across Europe, Asia, Africa and the Americas: sorcerers who have transformed themselves into animals, or humans turned into animals by a sorcerer. Beliefs about werewolves date back to ancient times and are linked to the belief that a sorcerer, shaman or mythical hero possesses the ability to take the form of any person, animal, plant or even a stone. For example, very often
'witches' in Africa take on the form of animals.

In ancient times, on the eastern coast of Attica in Greece, young women who had dedicated themselves to the cult of Artemis, the goddess of the hunt, would don bearskins, believing that by doing so they would transform into she-bears. On 15 February, at the end of the year according to the ancient Roman calendar, the so-called Lupercalia were celebrated in Rome, during which the Lupercae priestesses (from 'lupus' – 'wolf'), completely naked and portraying the dead, ran through the streets of the city, howling like dogs or wolves. Many people, draping themselves in dog skins, portrayed dogs.

In ancient times, dogs and wolves were often equated. Hence the frequent references in historical sources to people 'transforming' into either dogs or wolves. As late as the 19th century, the Estonians still used a second name for wolves – 'St George's dogs'. In the 15th century, Welsh military units in Britain were often referred to as the 'army of dogs', whilst in the 16th century in Venice and Italy, the bravest military units were called
'as loyal as dogs'. A similar phenomenon was observed in Germany. The famous ancient Norse warriors – the berserkers – would sometimes bark like dogs and sometimes howl like wolves. The word 'berserker', as recent research shows, means 'without a shirt'. They went into battle without chainmail, their faces smeared with black paint, and often with a wolfskin draped over their bodies. Unbridled in their fury, they were considered invulnerable and, as it were, outside the law; everything was available to them and everything was permitted.

Ancient Germanic mythology often recounts how the warriors of Odin, the ancient Germanic god of war, went into battle without

chain mail, clad in black robes, and behaved at times like dogs and at others like wolves. According to popular belief, these ‘wolves’ were thought to be the souls of warriors fallen on the battlefield, those who had been hanged, outcasts and the like—that is, individuals who, under ancient Germanic law, were considered outlaws. It is characteristic that among the Etruscans in ancient Italy, the god of the dead was depicted as a wolf. Just as the dead exist on the other side of everyday reality, so too were those banished from society for misdeeds regarded by the primitive peoples of Europe as being outside the law and equated either with the dead or with ferocious animals roaming the forests, such as bears or wolves (dogs). Those banished from society were called ‘the one who roams the forest’, ‘the wolf’, ‘the wolf’s head’, and so on.

Beliefs in werewolves developed under the influence of ideas that had long prevailed in the thinking of primitive people regarding the descent of humans from certain animals (totemism), the animism of all nature (animism), and the cult of fertility associated with the veneration of ‘Mother Earth’. Such beliefs also developed under the influence of ancient peoples’ conceptualisation of the categories of ‘time’ and ‘space’, which was shaped by their entire socio-economic practice. For most primitive peoples, the year was divided into two halves – winter and summer. Spring and autumn, that is, the off-season period, were regarded as ‘times between times’, when nature was on the brink of life and death. The same was true of the belief in souls and the animism of all nature.

In these ‘in-between times’—which also include dawn and midnight—souls and spirits are said to be particularly active. According to ancient beliefs, during these periods people could, by changing their appearance, visit another world and make contact with it, either for their own benefit or to their detriment. All it took was to don an animal pelt or adorn oneself with other attributes of nature, and a person, whilst remaining human, would simultaneously transform into another creature or object—that is, become ‘neither one thing nor the other’. Gradually, the notion crystallised in people’s minds that some individuals were more capable of such transformations than others. Those with greater aptitude could quickly and directly come into contact with the forces of nature, sometimes benefiting people, sometimes harming them. A belief in werewolves (from the Old High German ‘verian’ – ‘to change clothes’) arose.

Towards the end of the Middle Ages, under pressure from the Church—which regarded any deviation from Christian dogma as the machinations of 'evil forces'— such an 'ability' came to be attributed to witches, sorcerers and similar figures who, in order to make contact with other forces more quickly, used—according to the convictions of the Church's ideologues—special, 'magical' potions and ointments for this purpose.

There is ample evidence that individuals accused by the clergy of werewolfism, witchcraft and similar sins used potent narcotic substances.

This was, in particular, caused by the poor diet of the common people in Europe at that time. If, for whatever reason, one's current level of nutrition is insufficient for normal functioning, taking drugs can provide temporary relief. However, as the body quickly becomes accustomed to such stimulation, it ceases to produce the necessary compounds on its own. This is how drug dependence arises, leading to severe neuropsychiatric disorders and the degradation of the personality. The craving for narcotic substances increases under stress, during starvation, and when the diet is deficient in glucose and vitamins B, D and C. When the population's diet improved with the introduction of amino acid-rich vegetables such as green peas and beans, the number of the above-mentioned cases also decreased.

A predisposition to the condition is rooted in processes taking place within the human body. In other words, alongside social factors, there are also deep-seated biological prerequisites for the development of drug addiction. Most likely, the level of endogenous ethanol and its oxidation products in the blood—which play an active role in metabolism—plays a decisive role here.

In medieval Europe, among the phenomena of mass drug poisoning, the most well-known were the epidemics of ergotism (from the French 'ergot' – 'ergot of rye'), caused by the consumption of grain infected with ergot. These were accompanied by outbreaks of lycanthropy (from the Greek 'lycanthrope' – 'werewolf') – a form of mental disorder in which sufferers imagined themselves transformed into beasts, predominantly wolves. In the 17th century, lycanthropy, particularly in France, took on the character of an epidemic. Sufferers imagined themselves covered in fur, with terrifying claws and fangs, and claimed

that during their nocturnal wanderings they tore people, animals and, in particular, children to pieces. It was not uncommon in villages for lycanthropes to be caught running on all fours and imitating the howls of wolves. They were regarded as sorcerers who had taken on animal form in order to cause greater harm to Christians. Raids were organised against these ‘werewolves’, who were subjected to the usual punishment for sorcerers – burning at the stake.

Ergot contains a varied mixture of alkaloids, the structure of which is based on a substance called lysergic acid. The Swiss researcher Hofmann had an adventure that began on a grim note but, fortunately, ended happily. Whilst working with one of the ‘synthetic’ derivatives of lysergic acid, recorded in the laboratory logs under the code LSD-25, he accidentally licked a drop of the substance. A few hours later, he was taken to the psychiatric ward of a hospital, as, in the opinion of his relatives, Hofmann had gone mad. The doctors observed symptoms similar to those associated with schizophrenia. A few days later, Hofmann returned to the laboratory in perfect health. Through his own experience, he became convinced that LSD-25 causes hallucinations. Given mass poisonings of the type described above, coupled with the Church’s intensified struggle against evil forces—whose activities were drummed into the minds of the population—it is hardly surprising that there were mass outbreaks of lycanthropy.

Thus, beliefs in werewolves are rooted not only in the remnants of pagan cults (totemism, animism, ‘Mother Earth’ – the blackening of the face) and echoes of the socio-legal practices of primitive peoples, but also in the ideological and even biological spheres of the reality that surrounded people during the period when these beliefs were at their peak.

THE MARTIAL ARTS OF THE EAST

In today's world, as A. Dolin explains, the martial arts of the East continue to give rise to a great deal of conflicting interpretations and perceptions. In those countries where judo, karate, aikido, Shaolin Kung Fu, Tai Chi Chuan and other systematised traditional forms of hand-to-hand combat have not taken root, they are judged mainly on the basis of films and occasional magazine articles. In the USA, France, West Germany, the Netherlands and England, where the history of numerous schools of martial arts of Eastern origin spans several decades, the situation regarding information is better. Dozens of books and magazines are published, exploring the practical aspects of various martial arts schools, alongside methodological guides and historical overviews. Nevertheless, it is difficult to name a work by a European or American author that covers the full spectrum of issues encompassed by the concept of 'martial arts'. The books on military-applied sports published in recent years in Japan, China, Korea and Vietnam are informative but by no means exhaustive; they cover only specific issues or recount well-known legends. At the same time, the works of Eastern masters are often shrouded in a mystical aura and replete with excessive exoticism.

The ever-increasing flow of specialist literature, year on year, does not in fact shed light on the fundamental deeper meaning and inner essence of kempo as an ancient martial art, as a science of life that has been refined over millennia, remaining a unique treasure trove of knowledge for the peoples of the East. To get closer to the origins of kempo as a Teaching, it is necessary to consider it within the full context of historical, religious-philosophical, cultural and medical-biological factors.

This is an attempt to provide a comprehensive analysis of the 'art of combat' and, using Japan as an example, to trace the development of the tradition to the present day. The historical concept of 'martial arts' (Japanese: bu-jutsu; Chinese: wushu; Korean: taekwondo; Vietnamese: võ đạo) encompassed all areas of human activity relating to war and military

affairs, including unarmed hand-to-hand combat as well as combat with weapons, shooting and the throwing of various projectiles, vaulting, acrobatic feats in theatrical duels, as well as the principles of general military combat, elements of army strategy, fortification and so on. Appropriate psychological training was considered an essential component of any form of wushu.

In China, the classical 'main' forms of wushu were usually divided into three groups: unarmed and armed combat; archery and projectile throwing; and theatrical and sporting performances. Other classification systems distinguished between unarmed combat and fencing (with spears, swords, sticks, etc.) in hand-to-hand combat; however, the distinction between them was not usually made, as training in martial arts schools was comprehensive and involved mastering various types of weapons.

Modern 'sport' wushu in the PRC is divided into the following categories: the performance of sets of formal exercises (tao); pre-arranged unarmed sparring; free unarmed sparring between two partners; unarmed combat against multiple opponents; exercises with weapons (tao) and combat with or without weapons against armed opponents; therapeutic and health-promoting exercises incorporating breathing exercises and acupressure. Nevertheless, within wushu (bu-jutsu), the concept of 'hand-to-hand combat' has become firmly established: fighting against armed or unarmed opponents with bare hands or using any improvised means (including bladed weapons) – quan-shu or quan-fa (known as 'Kempo' in the Japanese tradition).

Over the centuries, the training of soldiers or peasants in rebel units followed a simplified programme of classical wushu, which was intended to instil a certain culture of movement, skills in handling basic types of weapons, horsemanship, and so on. True masters, however, undertook a course of study lasting many years in monasteries or closed schools, where experienced instructors initiated them into the secrets of qigong – the technique of controlling the body's vital energy, the ultimate weapon of antiquity. Only esoteric schools, which possessed extensive, meticulously developed training methods, could provide a master with the key to perfection in kempo – the Art of Combat.

The Japanese word ‘kempo’, as a generic term, is written with the same ideograms as the Chinese ‘quan-fa’, the Korean ‘kwon-pop’ and the Vietnamese ‘quyen-fat’. Its literal meaning is ‘the teaching of the fist’.

‘The Righteous Law of the Fist’ or ‘The Science of Hand-to-Hand Combat’. Among these equivalent names the Japanese term has the widest use and in the greatest extent corresponds to the subject matter of this book. Whilst in China, ‘quan-fa’ usually refers to unarmed fist fighting, in Japan the concept of ‘kempo’ encompasses any systematised forms of combat in which the use of weapons is permitted. The term ‘kempo’ is used in the same sense in the West, although one sometimes encounters a vulgarised interpretation of it as one of the modern martial arts schools. In Europe and America, all forms of Chinese martial arts are often grouped under the term ‘kung fu’. However, the very concept of ‘kung fu’, which found its way into the West at the beginning of the 20th century and became firmly established in the post-war period, is entirely inadequate to describe what it now signifies. The word ‘kung fu’, adopted by Europeans, derives from the Chinese ‘gong fu’ – meaning ‘diligent practice’ or ‘training’ in any form of physical and spiritual cultivation. The martial arts are not directly connection to to nor has has. This an artificial term for ‘Chinese boxing’, which carries with it a whole complex of deliberately distorted notions with a strong tinge of ‘Eastern exoticism’. It is precisely for this reason that the word ‘kung fu’—even though it has nowadays migrated, with a new meaning, from the USA, England and France back to Hong Kong and Taiwan—is unacceptable. Furthermore, the Chinese concept of ‘kung fu’ is not the best term for the martial arts of Japan discussed in this book. Perhaps there is no universal definition for related systems of martial arts at all, but ‘kempo’ seems to be the most accurate of all possible options. Nevertheless, since the word ‘kempo’ does not reflect national specificityand distinctiveness of the various branches, it is impossible to avoid using certain Chinese, Japanese or Korean terms in this work also proved impossible, especially as all have long been in common use in Western countries.

What, then, is the meaning behind the concept of ‘Kempo’? It is not easy to give a definitive answer. Kempo is a discipline, a complex system of spiritual and physical culture; it is centuries-old martial traditions,

which are constantly evolving. Kempo is also a path to realising the concept, popular in the East, of the unity of the microcosm of the human personality and the macrocosm, and of achieving harmony with the world and with oneself.

Broadly speaking, the following sources of kempo can be identified: Taoist philosophy, which put forward the ideas of Emptiness, the interplay of Yin and Yang, and the interaction of the Five Primordial Elements; as well as Non-action, Softness, Naturalness and Metamorphosis.

Yoga as a system of mental training and physical and spiritual self-improvement, in its numerous forms, taking into account the three main national traditions: Indian yoga, Tantric Buddhist (Chinese, Tibetan, Japanese) yoga, and Taoist (Chinese) yoga.

Traditional theories of Sino-Tibetan medicine concerning the circulation of vital energy (qi), acupoints and meridians, their connection to internal organs, and the development of the body's energy (qi gong).

Ancient 'bionics', the observation of animal behaviour, from which the so-called animal-style kampo martial arts arose.

Local systems of hand-to-hand combat and ritual combat dances of various tribes and ethnic groups.

The military science of ancient China, based on the theories of Daoist thinkers, which formulated the principles of combat strategy and tactics.

Chan (Zen) – a Buddhist psychological technique that enabled remarkable results to be achieved in concentration and self-suggestion.

One can also identify the constituent elements of kempo that have survived from antiquity to the present day:

– Confucian ethical norms in character development;

– a diverse and meticulously developed training methodology: physical conditioning, mental reorientation, methods for working with the five elements, objects and symbolic forms;

– an extensive arsenal of combat techniques encompassing the full diversity of national disciplines, schools, styles and traditions.

Only such a classification makes it possible to view kempo as a unified system, as a cultural phenomenon, as a distinct field of knowledge, and as a Teaching.

In China, in the middle of the first millennium AD, a clear division emerged between the two branches of esoteric martial arts: the Taoist and the Buddhist.

The Taoist branch of kempo gave rise to numerous schools of the so-called ‘soft’, or ‘internal’, tradition, which emphasised the development of the body’s energetic capabilities and the control of the bio-energy qi, enabling the sophisticated techniques of hand-to-hand combat to be greatly enhanced. The birthplace
of the ‘internal’ school is traditionally considered to be Mount Wudang in Hubei Province, where a legendary hermit-warrior once lived and where a Taoist monastery now stands. Sometimes Taijiquan, Bagua Zhang, Xingyi and all other ‘internal’ schools (Neijia) are grouped under the term Wudang School (Wudang style). The ‘internal’ style of Kempo was practised in countless Taoist sects.

Monastic Buddhist schools, tracing their origins to the Chan monastery of Shaolin, favoured the so-called ‘external’ school of kempo (wai-jia), which placed particular emphasis on physical conditioning and the development of speed and strength – in short, everything that is now associated in the West with the concepts of kung fu and karate. There were also intermediate variants, such as the Emei-Shan-Quan style, which combined the main characteristics
of ‘soft’ and ‘hard’ schools.

The classification and systematisation of the esoteric schools and styles of kempo is a task for the future, comparable in difficulty to compiling
Linnaeus’s ‘Systema Naturae’. A very rough hierarchy can be outlined as follows. Within each of the two branches of classical kempo – the Daoist (‘internal’) and the Buddhist (‘external’) – there are historically established major schools such as Taijiquan or Shaolinquan. Each such school has tens, sometimes hundreds of thousands, of practitioners. Within a major school, there are minor schools associated with a particular outstanding master, which tend to become gradually distinct. Within a small school, specific branches and sub-branches periodically emerge, giving rise to new, original styles. Furthermore, within both large and small schools, there are
‘animal’ styles – for example, the five Shaolin styles (‘Tiger’,
‘Dragon’, ‘Leopard’, ‘Crane’ and ‘Snake’) or the twelve styles

of the Bagua Zhang school. Individual ‘animal’ styles may also become distinct and develop into schools of their own, such as the Monkey school, the Grasshopper-Mantis school, and so on. Within such a school, sub-varieties emerge: ‘leaping monkey’, ‘lolling monkey’, and so on. In some smaller schools, the subdivision into sub-styles is explained by an increasing degree of technical complexity; for example, the eight sub-styles of the ‘Drunkard’ school – ranging from the ‘drunkard with a cup’ to the ‘drunkard with a barrel’.

Schools operating in a highly competitive environment usually kept their techniques and training methods secret, but occasionally, as an exception, two or even three schools would merge, as was the case with the founding of the Three Masters’ School of Cai-Li-Fo-Quan.

Even in our own time, there have been numerous attempts to combine different schools – ‘external’ and ‘internal’ styles – by taking the most valuable elements from all sources and blending components of various national Kempo systems. This trend towards synthesis is natural for our era, when the opening up of schools and the development of information networks enable the active exchange of experience. However, the value of such ‘synthetic’ systems remains questionable for the time being, as they clearly lack the ‘polish of time’, the refinement and subtlety of the classical ‘pure’ schools, which represent a Path tried and tested by generations.

In China, for example, as early as the beginning of the 20th century, there were several hundred quan-shu schools, meaning that the various schools, styles and forms of unarmed combat were represented in unprecedented abundance. Equally diverse were the combined schools of jujutsu, kendo and iaijutsu in Japan.

Since ancient times, schools in China and neighbouring countries have existed in various forms. All schools can be broadly divided into religious-sectarian and secular categories. The former include martial monastic communities of the monastic order in Buddhist monasteries and Taoist sects, which incorporated the practice of martial gongfu into their ‘rituals’. Since Chan (Japanese: Zen) Buddhism made the most significant contribution to the formation of the philosophical basis of the martial arts, it was primarily the Chan monasteries—not only in China but also in Korea, Japan and Vietnam—that became the custodians and breeding grounds of the kempo traditions.

A classic example is the famous Shaolin Monastery, which became renowned as a ‘wushu academy’ and came to be seen as a collective symbol: for, in addition to the main Shaolin Monastery in Henan, there were other monasteries of the same name throughout the Middle Kingdom, where training was conducted according to a similar programme with minor modifications. However, in medieval Japan, for example, the bearers of the kempo traditions were not only Zen monks, but also the so-called warrior monks (sohei) belonging to the Shingon sect of Tantric Buddhism, as well as the priests of certain Shinto shrines dedicated to the god of war, Hachiman, or to various local warlike deities.

Secular schools varied considerably in their purpose. Some of them served the army: the Imperial Guards in China, the Taiping rebel forces, samurai units, clan-based ninja scout units, and so on. In addition, there were private schools: family schools (for blood relatives) and fee-paying schools – for the select few. In China, Japan, Korea and Vietnam, the concept of martial arts was imbued with a completely different meaning than in the West. The ultimate goal of kempo was not victory over an opponent, but victory over oneself, overcoming one’s own weaknesses and shortcomings. The kempo school became a school of life.

The system of training in kempo was as different from sport and military disciplines as heaven is from earth. However, this comparison is reversible, since in Eastern cosmology, man is considered to be the offspring of Heaven and Earth, and thus embodies both principles. Over time, the classical martial arts found application both in sport and in bloody battles, but neither of these defines their original essence.

If it were merely a matter of fighting techniques, kempo would most likely have died out completely following the advent of firearms, as happened with chivalric combat in Europe. Yet the tradition lives on.

Kempo masters have invariably become the heroes of folk tales and legends, chivalric ballads, sagas, novels and plays, and in our own time they have taken over the cinema and television screens. Among such heroes, one can single out famous military commanders, leaders of popular uprisings, wandering knights – defenders

the oppressed and the downtrodden, professional bodyguards and escorts for merchant caravans, free samurai ronin, Yamabushi monks, medieval ninja spies, and the founders and instructors of various schools of martial arts.

In the Middle Ages, the martial arts demanded a person's entire life. Their motto was: 'All or nothing!'. The old masters compared kempo to boiling water – if you let the fire in your chest die down, the boiling water turns into plain water. But practising the martial arts in and of itself did not necessarily have to turn a person into a stern ascetic, alienated from life's joys. The flame, born of inner energy, did not burn – it gave warmth and light. Self-discovery through the practice of martial arts heightened a person's sensitivity to beauty, to living nature, and to art.

It is no coincidence that the concepts of wen (culture) and wu (martial spirit) in the history of Far Eastern civilisation not only overlap but are also closely intertwined. In the Confucian tradition
The 'six arts' (ryū-i) included not only etiquette, music, calligraphy and mathematics, but also chariot driving and archery. In reality, however, the significance of the martial arts was far broader. If one regards the fine arts as one half of the spiritual life of an educated person, then the other half, for Japan, China, Korea and Vietnam, is undoubtedly the martial arts in all their complexity and multifaceted nature. Li Bo, the great poet of the Tang dynasty, was an excellent fencer, whilst the famous fencer Miyamoto Musashi was an excellent artist. Japan's foremost theorist of the martial arts, the Zen patriarch Takuan, wrote poetry and essays. A considerable proportion of treatises and manuals on fist-fighting in China take the form of poems featuring vivid comparisons and striking metaphors. In Japan, diplomas from samurai military schools were adorned with landscape tanka… A true master was expected to be equally skilled with the sword and the brush, and to be versed in the tea ceremony and the art of flower arrangement.

The martial arts of China and Japan made their most significant contribution to the development of classical theatre. Carefully devised sequences of formal exercises, both with and without weapons, were incorporated into the staging of Peking Opera, Noh and Kabuki performances. Japanese

actors studied sword and spear fencing techniques in order to master the physicality of a real fighter. In China, wushu forms were practised for the same purpose. Many Kabuki productions, with their abundance of battle scenes, resembled jousting tournaments, whilst tournaments at the court of the Qing emperors took the form of theatrical performances.

A sense of rhythm, so essential in the martial arts, links them to music. A person comes to understand their own nature by entering into the rhythm of endless transformations, feeling the pulse of the universe within their own heart. Indeed, the entire process of learning kempo, from the basics to the highest levels, is akin to studying music. First, one learns the notes; then one practises tedious scales; from there comes the transition to études, then to complex pieces and symphonies. The most gifted masters create like composers, achieving a harmonious resonance of body and spirit in the single rhythm of the Universe. Is this not why kempo today is finding numerous admirers on every continent, in dozens of countries?

Meanwhile, until relatively recently, the martial arts of the East remained outside the field of vision of Europeans. Some were not even aware of their existence. References in the press to the strange ‘Chinese boxing’ and ‘samurai jiu-jitsu’ not only failed to clarify the situation but, on the contrary, confused it even further. Towards the end of the last century, a stereotype of the short and frail Asian had taken hold in Europe. The image of a Chinese man with a long plait was associated with laundries, snack bars – anything but martial arts. The Japanese, Koreans and Vietnamese were perceived in exactly the same way by the average person. By suppressing peasant uprisings in China, imposing unequal treaties on Japan, and mercilessly exploiting the peoples of Indochina, the imperialist powers pursued a policy of force throughout the East. The successes of the young imperialist predator, Japan, in the wars against China and Russia came as a surprise to the entire civilised world. For the first time, people began to speak and write seriously about the Japanese military spirit, their fanatical courage, their contempt for death and their remarkable physical fitness. A craze for jiu-jitsu (jū-jutsu) swept through London, Paris, Berlin, Vienna and St Petersburg. Photographs and engravings from the turn of the century depict ruddy-cheeked, moustachioed strapping men in robes tied with a lavish bow – the first

jiu-jitsu enthusiasts. In their efforts to adapt these exotic techniques to the familiar classical wrestling they knew, they did not stand on ceremony when it came to ritual and, it seems, were entirely unconcerned with their own inner harmony. However, the craze for this fashionable sport soon passed, leaving its mark only in Conan Doyle's novels, in certain intelligence centres of European countries, and in Soviet sambo clubs. 'Samurai wrestling' was once again forgotten for a long time and only remembered after the Second World War, this time in occupied Japan. And so began the era of the 'Eastern Renaissance' in the West. Alongside Zen Buddhist literature, painting and architecture, the martial arts of the East made their way to Europe and America, took firm root in the major cities, turned young people's heads and baffled the older generation.

There are many reasons for the success of kempo in the post-war world. First and foremost was the crisis of moral values in the West's technocratic civilisation, which prompted young people to seek a way out of the impasse in the most unexpected directions: in the Beat movement, in rock music, and in protest demonstrations. Many turned to Eastern philosophy as a panacea for the ills of the age, attempting to interpret Hinduism, Taoism and Buddhism in their own way. One of the most alluring and fascinating forms of 'Eastern wisdom', which also had practical applications, turned out to be kempo.

The ease with which judo won people's hearts and entered the Olympic programme demonstrates, above all, that kempo—a sophisticated and systematised martial art originating in the East—knows virtually no boundaries and can adapt to any conditions, meeting the needs of people on every continent. Following in the footsteps of judo and jiu-jitsu, karate and kung fu, kendo and taekwondo, aikido and viet vo do have made their way to the West. This massive boom in martial arts is accompanied by unrestrained propaganda promoting 'Eastern morality' – the real or imagined ethnic values that underpin the entire complex of Eastern martial arts. And this is where we must separate the wheat from the chaff.

Each of the millions upon millions of devotees of traditional martial arts surely asks themselves: what's the point? Indeed, what is the point? For some, it is to gain self-confidence and an awareness of their own strength; for others, to break a record or win

a championship; and for others, to learn how to fight. And from this follows the conclusion: if one is to fight, then one must do so as the samurai did – ruthlessly and selflessly, until victory is achieved. This approach prevails in many sports clubs, combat training centres and marine corps camps. But those who have mastered the techniques of violence and killing, and are eager to put them into practice, forget the precept of kempo: never engage in combat without a noble purpose, or unless you are facing mortal danger. Kempo is a weapon of destruction, but for its founders it was an instrument of creation—the creation of the individual themselves, their body and spirit, their Form and their Substance.

Of course, these days the martial arts are no longer what they were several centuries ago; having remained untouched for millennia, in the 20th century they began to crumble like a house of cards. Life takes its toll. Whereas once a fencing or fist-fighting master might have spent his entire life in the mountains or stood guard day and night in a princely castle, neither is possible now. Returning from the gym, where he has just been sparring with spears in imitation of his warlike ancestors, a man changes his clothes and goes to the shop. On the way back, he pops into the cinema to watch the latest action film. Instead of composing poetry, he reads the newspaper; instead of gazing at the moon, he switches on the television.

JAPANESE NINJA

A. Dolin and G. Popov talk about ninjas. Ninja literally means ‘spy’. The root of the word, nin (or, in another reading, shinobu), means ‘to sneak’. There is also another nuance of meaning –
‘to endure, to bear’. This is the origin of the name for the most complex and enigmatic of all martial arts. Nin-jutsu is the art of espionage, the sort that 20th-century intelligence services could only have dreamt of. Having undergone superhuman physical and mental training, and being perfectly proficient in all unarmed and armed kempo techniques, ninja could easily scale fortress walls and cross moats, remain underwater for hours, walk along walls and ceilings, throw pursuers off the scent, fight with reckless bravery, and, if necessary, remain silent under torture and die with dignity. Spies and saboteurs who sold their services to the highest bidder, the ninja adhered to an unwritten code of honour and often faced death in the name of a cause. Declared to be people of the lowest class (hinin), outlaws standing outside the law, they commanded the involuntary respect of the samurai. Many clan leaders vied for the favour of experienced ninja, and many sought to instil the art of nin-jutsu in their retainers. And yet, for centuries, military espionage remained the preserve of the select few, a hereditary profession practised by a narrow circle of indispensable specialists – a clan ‘craft’.

Ninjutsu, which is undoubtedly linked to the esoteric practices of a number of Chinese wushu schools, holds many mysteries not only for historians, but also for doctors, biologists, chemists, physicists and engineers. What we know is merely the tip of the iceberg, the base of which plunges into the dark depths of mysticism and the cosmic abysses of parapsychology.

It is only recently that a number of works have appeared which shed light on the mysteries of nin-jutsu. These include, first and foremost, D. Drager’s *Nin-jutsu: The Art of Being Invisible*, D. Drager and R. Smith’s *Asian Martial Arts*, and E. Adams’ *Ninja: The Invisible Assassins*. All are based primarily on the research of Hatsumi Masaaki, the living heir to the medieval ninja tradition.

Tradition traces the origins of nin-jutsu back to the beginning of the Common Era, but concrete evidence of the existence of mysterious mountain communities in Central Japan can be traced no earlier than the 7th century.

The earliest records of organised military espionage under the leadership of Michinoue no Mikoto date from the reign of Empress Suiko (593–628). During those years, Prince Setoku Taishi waged war against the powerful feudal lord Mori for control of the province of Ōmi. Incidentally, the prince was a highly enlightened statesman and a zealous advocate of Buddhism. Legend has it that Bodhidharma himself, having completed his mission in China, appeared in Japan in 622 disguised as a beggar, conversed with Setoku Taishi and even exchanged poems with him. During the hostilities, the prince sent a spy, Otomo no Saijin, to the enemy's camp. The spy returned with valuable intelligence, for which he was awarded the honorary title of Shinobi (meaning 'Observer'). This is where the term Shinobi (or ninja)-jutsu originated.

In all likelihood, the process by which the ninja emerged as a distinct social class, a closed caste, ran parallel to the formation of the samurai class and followed almost the same path. However, whilst samurai bands were initially formed on the north-eastern borders from deserters and fugitive commoners, some fugitives preferred to hide close to their home regions. The growing power of the samurai class subsequently enabled it to occupy an independent position in Japanese social life and even to come to power, whereas the scattered groups of ninja never represented, nor could they ever have represented, any significant military or political force. A number of Japanese historians define the ninja as warrior-farmers (jizamurai). Indeed, in the early stages of their development, they had much in common with the samurai class. But as early as the Heian period (8th–12th centuries), marked by the rule of the court aristocracy, the proud bushi regarded these mercenary spies as a dangerous, outcast element. From time to time, local feudal lords and government troops would carry out full-scale raids on the ninja, ransacking their camps and settlements and killing the elderly and children.

Ninja strongholds were scattered throughout the country, but the wooded outskirts of Kyoto and the mountainous regions of Iga and Koga became the natural centres of ninjutsu. From the Kamakura period (1192–1333) onwards

Ninja camps were often replenished by ronin, former samurai who had lost their lords in bloody internecine strife. Over time, however, access to the mountain communities was virtually cut off, as the associations of independent mercenaries gradually evolved into secret clan-based organisations, bound by ties of blood and an oath of allegiance. Each of these organisations became a unique school of martial arts and cultivated its own distinct tradition of nin-jutsu, being referred to, like the samurai schools of bu-jutsu, as a 'ryū'. By the 17th century, there were around seventy ninja clans. Of the twenty-five most influential, the Iga-ryū and Koga-ryū stood out in terms of scale. Within each clan, its own tradition of martial arts was passed down from generation to generation.

Excluded from the state system of feudal relations, the ninja developed their own hierarchical class structure, which met the needs of such organisations. At the head of the community stood a military-clerical elite (zenin). Sometimes the zenin controlled the activities of two or even three neighbouring ryu. Leadership was exercised through an intermediate level – the chūnin – whose duties included conveying orders, training and mobilising the rank-and-file operatives at the lower level (genin).

History has preserved the names of some dzenin from the late Middle Ages: Hattori Hanzō, Momoti Sandayu, and Fujibayashi Nagato. The status of the upper and middle echelons varied depending on the community. Thus, in the Koga clan, real power was concentrated in the hands of fifty chūnin families, each of which had between thirty and forty genin families under their command. In the Iga clan, by contrast, all the reins of power were concentrated in the hands of three dzenin families.

The key to the community's well-being was, of course, secrecy; therefore, rank-and-file spies, who carried out the most difficult and thankless work, received minimal information about the top of the hierarchical pyramid. Often, they did not even know the names of their own dzenin, which served as the best guarantee of maintaining secrecy. If the ninja had to operate in several groups, communication between them was carried out through intermediaries, and no information regarding the composition of neighbouring groups was disclosed.

The tyunin were responsible for organising meeting points, constructing hideouts, recruiting informants, and providing tactical guidance for all operations. They also made contact with the clients – agents of the major feudal lords. Nevertheless, the contract was concluded between the zenin and the daimyo himself. The remuneration received for their services was also handed over to the clan head, who distributed the money as he saw fit.

It was above all the genin who brought great renown to the art of espionage: for the most part, these were anonymous operatives carrying out the most complex missions, braving danger and pain, risking their lives at every turn for a pittance or simply ‘for the love of the art’. If captured, a tūnin might still hope for salvation by promising a ransom or selling some important documents in exchange for his life, but the fate of an ordinary ninja was sealed – he would breathe his last in terrible agony. Samurai, faithful to the codes of chivalry, did not torture prisoners of war of noble birth. They rarely stooped to torturing commoners, on whom one could at best test the sharpness of a blade.

Ninja, however, were a different matter: outcasts amongst men, cunning and vicious beasts who always struck from the shadows, forest werewolves skilled in diabolical hand-to-hand combat techniques and the sorcerous art of shape-shifting. If one of these ‘ghosts’ fell into the hands of the guards whilst still alive—which happened extremely rarely—he was interrogated with particular relish, with sadistic sophistication. Unfortunate ninjas had their skin flayed, their wounds sprinkled with salt; they were roasted over a slow fire; their fingers and toes were cut off one by one, followed by their limbs; they were subjected to the ‘ant torture’; and they were tied to a hollow metal pillar with a fire burning inside it.

One such torture method was particularly popular. The victim was tied to a ‘stretcher’ on the floor. A small vat was secured above them, with a rope stretched across it. A cauldron of boiling tar was suspended from one end of the rope, whilst the other end was placed between the victim’s teeth, after which they were stabbed with a sword. As the victim convulsed, the hot tar spilled onto their body.

Those who remained silent until the end were condemned to a long and agonising death. For example, following Chinese traditions, the victim was transformed into
a ‘pig-man’ – their arms and legs were chopped off (stopping

the bleeding), their eyes were gouged out, their eardrums pierced, their tongue torn out, and they were ‘set free’ in this state. In another variation, the prisoner, tied tightly to a wooden frame, was suspended in a seated position like a swing above a sharpened bamboo shoot, which soon reached a critical height. To speed up the process, water was poured over the rope to make it sag.

Those with whom there were particular scores to settle were boiled in water or oil over a low heat, with intervals, so that the execution sometimes lasted more than a day.

As a rule, hapless spies, knowing what awaited them, preferred to take their own lives rather than wait for the torture.

The code of ninjutsu required one to disfigure one’s face beyond recognition and, in general, to destroy all signs that might aid in the identification of one’s ryū. If, however, circumstances prevented this (for example, if a ninja was caught in a hanging noose or had been rendered unconscious) and if the torment became unbearable, there remained one last resort – to bite off one’s own tongue, which caused pain shock and profuse bleeding, leading to death.

Nevertheless, although ninjas were taught from childhood not to value their lives, none of them, of course, were in any hurry to pass into the next world and be reborn, at best, as a flower or a butterfly. For their part, they did everything possible to avoid such a fate. Realising that all risky undertakings depended not so much on bravery as on the skills of those involved, the Zenin took great care to nurture the younger generation and train their personnel. The fruits of their efforts were evident in the mass production of superhuman spies, each of whom embodied the wildest fantasies of contemporary detective writers.

Ninja training began in infancy. Parents had no choice, for a child’s career was dictated by their membership of the outcast caste, and success in life—that is, promotion to the ranks of the tunin—depended solely on the fighter’s personal qualities.

Physical training began in the cradle. At home, a wicker cradle with the baby was usually suspended in a corner. From time to time, the parents would rock the cradle harder than was necessary to lull the child to sleep, so that its sides would bang against the walls. At first,

was frightened by the jolting and cried, but gradually got used to it and instinctively curled up into a ball when jolted. After a few months, the exercise was made more difficult: the child was taken out of the cradle and suspended freely 'by the reins'. Now, when it hit the wall, it had to not only curl up but also push itself away with a hand or foot. Similar playful exercises were carried out in reverse, when a soft but fairly heavy ball was rolled towards the child. Acting on its instinct for self-preservation, the child would raise its arms to defend itself, 'blocking' the ball. Over time, it began to take a fancy to such games and confidently dealt with 'opponent'.

To develop the infant's vestibular system and muscles, they would periodically spin the baby in different planes or, holding them by the legs and lowering them headfirst, encourage them to 'stand up' in one go on the adult's palms.

In some cases, a young ninja as young as six months old would begin learning to swim and master swimming techniques before they could walk. This developed their lungs and gave them excellent coordination. Once accustomed to the water, a child could stay afloat for hours, dive to great depths, and hold their breath for two or three minutes or more.

For children aged two and over, games designed to test reaction speed were introduced: such as 'tug-of-war' or 'magpie the thief' – which required the instant withdrawal of an arm or leg.

From around the age of three, specialised strengthening massage and breathing exercises began. The latter was considered of crucial importance throughout all subsequent training, which resembled the Chinese qigong system.

As in Chinese kempo schools, all ninja training was carried out within the framework of the trinity of Heaven, Man and Earth and was based on the principle of the interaction of the five elements.

As soon as a child gained stability on land and in water—that is, could walk, run, jump and swim well—the training moved to 'Heaven'. First, a log of medium thickness was secured horizontally just above the ground. On it, the child learnt several simple gymnastic exercises. Gradually, the log was raised higher and higher above the ground, whilst

decreasing in diameter, whilst the set of exercises became considerably more complex: it included elements such as the ‘split’, jumps, somersaults, and forward and backward flips. The log was then replaced by a thin pole, and eventually by a taut or sagging rope. After such training, it was no trouble at all for a ninja to cross a chasm or a moat by throwing a rope with a hook to the opposite side.

Techniques for climbing bare-trunked trees (with and without a rope loop around the trunk), as well as jumping from branch to branch or from a branch to a vine, were also practised. Particular attention was paid to jumps from a height and vertical jumps. When practising jumps from a height, the level of difficulty was increased slowly and cautiously, taking into account the age-related characteristics of the body. There were also various methods of cushioning the impact of a fall using the legs, arms and the whole body (in a somersault). Jumps from a height of 8–12 metres required special ‘cushioning’ somersaults.

The characteristics of the terrain were also taken into account: for example, one could jump from a greater height onto sand or peat, but from a lower height onto stony ground. Trees with dense foliage were a favourable factor for ‘high’ jumps, as the branches could act as a spring and provide a chance to grab hold of a branch. Diving was a separate discipline.

Ninja high jumps, about which many legends have been told, were based primarily on breath control and the ability to mobilise ki (the body’s energy). However, in childhood, only the technique of the movements was learnt. There were many ways to perform a high jump, but preference was always given to the ‘roll’ jump, arms forward, with or without a somersault, from a running start or from a standing position. In such jumps, which were used to clear small obstacles such as fences, carts, pack animals, and sometimes even the chains of pursuers, it was important to assume a fighting stance immediately upon landing. High jumps were usually practised on the simplest of ‘training aids’ – instead of a bar, the child had to leap over a thorny bush; however, during ‘exams’, real weapons were also used, which, in the event of failure, could cause serious injury. Pole vaulting was practised with equal diligence, enabling one to clear walls several metres high in the blink of an eye.

Long jumps across deep ditches and ‘wolf pits’ were intended to instil a fearlessness of heights and the skill of landing not only on one’s feet but also on one’s hands, pulling oneself up.

‘Multi-stage’ jumps formed a special category. As a preparatory exercise for these, one had to master running up a vertical wall. After a short run-up, the person would run diagonally upwards for several steps, trying as far as possible to maintain their balance by maintaining a steep angle to the ground. With sufficient skill, a ninja could thus dash up a three-metre cliff and come to a halt on the crest, or, pushing off sharply from the support, leap down and launch a surprise attack on an opponent. In Chinese quan shu, this technique was known as
‘the tiger leaping onto the cliff’. Another variation of the multi-stage jump involved leaping onto a low (up to 2 m) object, which served as a sort of springboard for the next, final jump to a total height of up to 5 m. This technique, combined with the use of miniature portable spring-loaded springboards, often created the illusion of ‘flying through the air’.

Developing strength and endurance formed the basis of all ninja training. One of the most popular exercises for children was ‘hanging’ from a tree branch. Clinging to a thick branch with their hands (without using their feet), the child had to hang for several minutes at a great height, and then climb back up the branch unaided and slide down the trunk. Gradually, the ‘hanging’ time was increased to an hour. An adult ninja could thus hang from the outer wall of a castle right under the noses of the sentries, so that, when the opportunity arose, they could sneak inside. Naturally, they also practised numerous push-ups, weightlifting and walking on their hands.

One of the mysteries of ninjutsu is walking on the ceiling. Let us make it clear straight away that no ninja could walk on an ordinary smooth ceiling. The secret lay in the fact that the ceilings of Japanese rooms are adorned with exposed, relief-carved beams and rafters running at a short distance from one another. By bracing their hands and feet against parallel beams or clinging on with
‘climbing claws’ onto a single beam whilst hanging with their back to the floor, a ninja could make their way across the entire room. In the same manner, but by leaping, they

could climb upwards, bracing themselves against the walls of houses in a narrow alley or in a castle corridor.

One of the most intriguing aspects of ninja training was running over various distances. Running a marathon was the norm for any child aged 10–12: they would cover several dozen kilometres in a day with almost no stops. Such skills were required not only to escape pursuit, but also to deliver important messages. For very long distances, the relay principle was used. In sprinting, an ordinary straw hat served as an indicator of 'sufficient' speed. At the start, the runner had to press the hat against their chest, and if it remained there, held in place by the oncoming wind, right up to the finish line, the task was considered completed. Obstacle courses could take a wide variety of forms. Barriers, traps and snares were set up along the route; ropes were stretched across the grass; and 'wolf pits' were dug. A young ninja had to spot signs of human presence whilst moving without stopping, and either go round the obstacle or jump over it.

To move through enemy territory, it was not enough simply to be a good runner – one had to learn how to walk. Depending on the circumstances, a ninja might use one of the following walking techniques: the 'stealth step' – a soft, silent roll from heel to toe; the 'gliding step' – the standard method of movement in kempo, involving arcing movements of the foot;
the 'sunken step' – moving in a straight line, with the toe pressed tightly against the heel; the 'leaping step' – powerful thrusts with the feet, resembling the 'triple jump' technique; the 'single-leg step' – hopping on one leg; 'long stride' – a normal stride; 'short stride' – moving in the manner of 'race walking'; 'toes-first walking' – walking on the toes or on the heels; 'sideways walking', 'normal stride' – moving
'side-by-side' or with one's back turned to prevent pursuers from determining the direction of movement; 'staggered walking' – zigzagging movements.

During group operations in terrain where footprints were clearly visible, ninjas most often moved in single file, one behind the other, concealing the number of people in the unit. The main requirements when walking by any method were speed, conservation of energy and breath control. An important addition to the art of walking was moving on

tall, lightweight bamboo stilts – takueuma – which could be fashioned in a matter of minutes if necessary.

As inhabitants of remote mountainous regions, the ninja were natural mountaineers. From a very young age, a child was taught to scramble up cliffs and rocky scree slopes, descend into crevices, and cross rapids and bottomless chasms. All these skills were later intended to help the infiltrator scale the impregnable walls of castles and penetrate the inner chambers of monasteries. The art of rock climbing (sakana-bori or toheki-jutsu) was one of the most difficult subjects in the ninja training programme. Although certain aids existed to facilitate the ascent, it was believed that a true master should scale a sheer wall using nothing but his own hands and feet. The secret lay in the ability to concentrate strength and the life-force ki into the fingertips. In this way, even the slightest ledge or bump on the wall's surface became a reliable foothold. Having found just two or three such ledges, the ninja could confidently continue his ascent. Mentally, at this moment, he would project himself 'into the depths' of the wall, as if his body were adhering to the stone mass. Castle walls, built from huge hewn blocks, might have been considered impregnable due to their height and steepness, but for a trained climber, scaling such an obstacle with its multitude of crevices and jagged edges was no great difficulty.

In the Middle Ages, a person's life often depended on a horse. Take Richard III, for example, who on the battlefield generously promised 'a kingdom for a horse'. The horse was a samurai's faithful companion in battle and often came to the rescue of a scout in times of trouble. Although the terrain around ninja camps rarely allowed for keeping horses, and they mainly travelled on foot, the samurai art of horsemanship (ba-jutsu) was also part of their training. In addition to standard dressage, show jumping and archery from the saddle, ninja equestrian training included a number of acrobatic manoeuvres. A young ninja would master the technique of riding beneath the horse's belly or hanging off to one side, so that the enemy's arrows posed no threat to him. He had to be able to leap onto a galloping horse, fall from the saddle whilst the horse was at full gallop, hang from the stirrups and drag himself along the ground, feigning death. One of

most difficult feats was leaping from one horse to another. Even more difficult was jumping onto a horse from the ground, during which one had to kick the rider out of the saddle with one's foot and take his place. There were, admittedly, some things the ninja could not do, such as standing in the saddle, but this was simply due to a lack of tradition. In any case, any ninja far surpassed the average samurai in the art of horsemanship.

From around the age of four or five, boys and girls at the ninja camp began to be taught unarmed and armed combat – following the system of one of the jujutsu schools, but with the mandatory inclusion of acrobatic elements, which gave the fighter clear advantages in a fight. Furthermore, the children were subjected to brutal and extremely painful procedures designed to achieve complete joint mobility. As a result of many years of training, the joint capsule would expand, allowing the ninja to 'pull' their arm out of its socket, 'detach' a leg, or turn their foot or hand inside out at will. These remarkable abilities proved invaluable in situations where a spy had to squeeze through narrow openings or free themselves from bonds applied in some ingenious manner. Once caught by their pursuers and allowed to be bound, a ninja would usually tense all their muscles, so that they could then loosen the rope by relaxing them all at once,
'pulling' their arms out so that the loops slipped off their shoulders. The rest was simply a matter of technique. In the same way, a ninja could free themselves from a pain hold or a joint lock. In fencing, dislocating a joint allowed the arm to be extended by several centimetres during a strike.

In some schools, they also sought to reduce sensitivity to pain. To this end, from an early age, the body was treated with a special 'pain' massage, which involved tapping and strong blows, pinching, slapping, and later – 'rolling' the torso, arms and legs using a faceted stick. Over time, a slender yet strong muscular framework developed, and pain sensations were significantly dulled. A natural accompaniment to the entire physical education programme was the general hardening of the body. Children were not only taught to walk in almost nothing in all weathers, but were also made to sit for hours in the icy current of a mountain river, spend the night in the snow, spend the day under the scorching sun, go without food and water for long periods, and forage for food in the forest.

Their senses were honed to the utmost, for their very lives depended on correct and swift reactions. Their eyesight had to help the ninja not only to uncover the enemy's secrets, but also to safely avoid traps, since reconnaissance operations were usually carried out at night, creating an urgent need to find their way in the dark. To develop a child's night vision, they would periodically be placed for several days or even weeks in a cave where daylight barely penetrated from outside, and forced to venture further and further away from the light source. Sometimes candles and torches were used. Gradually, the intensity of the light was reduced to a minimum, and the child acquired the ability to see in pitch darkness. As a result of regularly repeating such exercises, this ability did not fade but, on the contrary, became firmly established.

Visual memory was developed through special exercises designed to improve attentiveness. For example, a set of ten objects would be laid out on a stone and covered with a handkerchief. The handkerchief would be lifted for a few seconds, and the young ninja had to list all the objects they had seen without hesitation. Gradually, the number of objects increased to several dozen, their composition varied, and the display time was reduced. After several years of such training, a scout could reconstruct a complex tactical map in full detail from memory and reproduce verbatim a dozen pages of text read just once. The ninja's trained eye would unerringly identify and 'photograph' the terrain, the layout of the castle's corridors, and the slightest changes in the camouflage or behaviour of the sentries.

Their hearing was so finely honed that a ninja could not only distinguish the calls of every bird and pick out a prearranged signal from a partner amidst the chorus of birds, but also 'understand the language' of insects and reptiles. Thus, the sudden silence of the frogs' chorus in the marsh signalled the approach of the enemy. The loud buzzing of mosquitoes beneath the ceiling of a room indicated an ambush in the loft. By pressing one's ear to the ground, one could hear the clatter of cavalry from a great distance. From the sound of a stone thrown from a wall, one could determine the depth of a moat and the water level to within a metre. From the breathing of those sleeping behind a screen, one could accurately calculate their number, gender and age; from the clang of a weapon, determine its type; and from the whistle of an arrow, gauge the distance to the archer. And that was not all…

Adapting to operating in the dark, ninjas learnt to see like cats, but at the same time sought to compensate for their vision through hearing, smell and touch. Furthermore, training designed to simulate prolonged blindness was intended to develop—and did indeed develop to a remarkable degree—extrasensory abilities.

Perennial exercises have shown to the ninja dog-like alertness, but his behaviour in the dark waslinked with a whole range of auditory, olfactory and tactile sensations. A ninja could judge the proximity of a fire by the degree of warmth, or the presence of a person – bysound and smell. As changes in the draughts allowed him to distinguish a through passage from a dead end, and a large room from a cubbyhole. When his sight was impaired for a long time in a person , develop their ability to orientate themselves in both space and time. A ninja, who naturally had no watches whilst operating indoors, was unable to tell the time by the stars; nevertheless, relying on his senses, he could determine the time to within a few minutes. After several years of training, the most talented pupils were able to move just as freely whilst blindfolded as they were without it. By cultivating their powers of suggestion, they would sometimes establish ‘telepathic contact’ with an invisible enemy lying in ambush and deliver a pre-emptive strike that hit the target precisely. In Japanese homes, with their abundance of sliding partitions made of waxed paper and screens, where one’s eyes could by no means always reveal the enemy’s whereabouts, all the other senses came to the rescue. The notorious ‘sixth sense’, or ‘extreme mind’ (gokui), which bu-jutsu theorists were so fond of discussing, was in essence a derivative of the existing five senses—or, more precisely, three: hearing, touch and smell. With their help, one could avoid a trap in time and even repel an attack from behind without turning round. Readers who doubt the veracity of such exotic abilities may be referred, for example, to Denis Diderot’s *Letter on the Blind for the Instruction of the Sighted*, which describes even more fantastical attributes of the human form. In particular, Diderot cites the following instructive case, accompanying it with an apt generalisation: ‘The blind man reacts so civilisedly to noise and voices that I have no doubt: practising this could make the blind very

dexterous and dangerous. I shall recount to you an episode involving a blind man which will convince you that, were he to learn to use the appropriate weapons, it would be rather unwise to expose one's chest to a shot from his pistol or to expect a blow from a stone. In his youth, he (the blind man) had a scuffle with one of his brothers, which ended rather disastrously for the latter. Annoyed with him over some unpleasant remarks, the blind man grabbed the first object that came to hand, threw it at his brother, hit him on the forehead, and the brother fell."

Hunters who shoot 'by sound' will confirm that this was no accident and that a sighted person can develop a similar skill. The sense of smell also alerted the ninja to the presence of people or animals, and furthermore, helped him to understand the layout of the castle's rooms. The living room, bedroom and kitchen—not to mention the lavatory—differed markedly in their odours. Moreover, the sense of smell, and to an equal extent the sense of taste, were indispensable for certain pharmaceutical and chemical procedures to which the ninja sometimes resorted.

The ninja's physical training continued right up until they reached maturity, which was marked by a rite of initiation into the clan. As in samurai families, this initiation usually took place at the age of fifteen, though sometimes earlier. Only upon becoming full members of the community did young men and women move on from standard psychophysical training to the study of the innermost mysteries of the spirit, as contained in the teachings of the Yamabushi monks, in Zen, and in the sophisticated techniques of yoga.

Where did the Yamabushi come from, and what connection do they have with hired spies and assassins? The Yamabushi are the most enigmatic of all the Buddhist sects ever to have existed in Japan, bearing a closer resemblance to a monastic order. The word is written with a character identical to the Taoist concept of 'saint' or 'sage' (xian), which indicates the sect's close connection with the Xian Taoist doctrines of self-cultivation and longevity. However, phonetically, the word 'yamabushi' means 'those who sleep in the mountains', which in itself indicates the focus of their teachings. The sect took shape in the 9th–10th centuries, establishing itself as a monastic order. It is believed that the Yamabushi devised a particular form of yoga, delving deeper into the mystical aspects of the esoteric Buddhist sects of Shingon and Tendai. They

summarised in a treatise inaccessible to the eyes of mere mortals. The title of this treatise, *Shugen-do* (‘The Way of Acquiring Power’), and all its tenets were to be passed down orally – from teacher to disciple. As a rule, the yamabushi’s most devoted disciples were ninja living in the neighbourhood.

Having devoted their lives to asceticism and tireless devotion in the depths of the forests, the yamabushi would only occasionally descend from the rocky peaks to pay homage to the sacred sites of the order’s central temple – Daigo-ji in Kyoto. Most yamabushi, much like the Taoist hermits of China and Korea or the ascetics of other sects of Tantric Buddhism, specialised in a single narrow field whilst mastering the secrets of yoga: for example, perfecting ‘hand techniques’, holding their breath underwater, or mastering the dagger. One can well imagine that several decades of diligent labour and a life of impeccable virtue in accordance with the ‘Shugendō’ canon yielded impressive results. It is no coincidence that most martial arts schools and almost all ninjutsu traditions traced their origins back to the legendary yamabushi. It was from them that the leaders of the ninja communities learnt mantras and mudras, which were intended to aid the intrepid spies in their endeavours.

Of course, by no means all ninja received the key to the mystery of existence from the yamabushi, nor did all of them manage to apply their knowledge with equal success. Nevertheless, it is evident that many custodians of the ninjutsu tradition, like the martial arts instructors in a number of samurai clan schools, drew energy and inspiration from the inexhaustible source of Tantric magic. From Tantric texts on medicine and alchemy, they borrowed techniques for concocting fast- and slow-acting poisons, healing balms and nourishing mixtures, such as unique concentrates in pill form capable of quenching hunger and thirst for several days.

Alongside mudras (there were nine main mudras associated with key energy centres) and mantras, ninjas also employed less exotic but more reliable acupressure techniques to heal injuries and overcome all manner of physical and mental ailments.

For example, to overcome a feeling of fear, one should, for five minutes, rhythmically press the ‘Divine Calm’ points with the index fingers of both hands, located on

the outer side of the calf, closer to the knee; to overcome fatigue – press firmly for a while, in time with your pulse, with the tip of the thumb of one hand on the point situated on the ‘pad’ between the first and second phalanges of the little finger of the other hand; to dull the sensation of thirst – gently bite the tip of your tongue rhythmically for a few minutes; to relieve a headache following a concussion – massage the point situated between the thumb and index finger of both hands alternately, and so on. There were recommendations for literally every situation in life, which often allowed spies to manage without the help of a doctor. In combination with self-suggestion acupressure proved to be a powerful stimulant of vitality in extreme conditions. Many samurai, not to mention ordinary townspeople and peasants, genuinely believed that ninjas were in league with evil forces, for which, of course, there were sufficient grounds. Take, for instance, the astonishing ability to suddenly ‘vanish’ from sight, as if dissolving into thin air… But at closer examination we will find nothing supernatural in the feats of the ninja. On the contrary, we come with an irrepressible thirst to understandof human nature, multiplied by everyday diligence and underpinned by a powerful tradition.

The ‘higher education’ of the ninja was not limited to athletic prowess or even the magic of tantric rituals. A spy had to be capable of more than just sneaking up on people, eavesdropping, spying and killing. In order to process and analyse the information gathered, it was necessary to be able to read with ease the most complex texts, written in intricate ideographic cursive script in the ancient style, and at times even in Chinese, as well as to be well-versed in matters of fortification, cartography, strategy and tactics.

To maintain a cover during reconnaissance operations, particularly those requiring long-term information gathering (‘resident work’), ninjas thoroughly mastered seven classic roles:

– The travelling actor. This role required knowledge of the folk songs and dances of the local area, as well as acrobatic acts and the routines of travelling comedians.

– The wandering monk collecting alms (komuso). This role required knowledge of a multitude of common prayers and rituals, as well as monastic rules and various subtleties of behaviour.

– A mountain hermit; this role presented the least difficulty for a ninja, as yamabushi were usually regarded as madmen in towns.

– A Buddhist priest. This required roughly the same knowledge as that of a mendicant monk, but, naturally, with greater attention to the rituals and customs of ‘one’s own’ temple.

– Illusionist and juggler. This role required general ‘circus’ training.

It was particularly important to master magic tricks involving changing clothes, locating and retrieving objects, concealing large items under clothing, and ‘vanishing’ to pre-arranged locations. Every self-respecting ninja was expected to become a professional magician.

– An ordinary peasant or townsman. The role required a certain knowledge of agriculture or a trade.

– A merchant. The role required an understanding of market conditions and the ability to assess the quality of goods.

During the Muromachi period, when the victorious Takeda Shingen waged one military campaign after another in various parts of the country, he instilled in many ninja clans skills in long-distance signalling that were relatively new to them. Signal fires with varying types of smoke, flags, drums, gongs and conch shells came to be used to convey urgent information over long distances. For example, if a ninja hoisted a red flag from the wall of an enemy castle, this signalled that the besieging army should use incendiary projectiles; if a blue flag was raised, they were to resort to water-based tactics, that is, attempt to flood the fortifications.

Although all ninja clans provided a universal education in espionage and sabotage training, the main for a skilled spy was to master their school’s signature technique to perfection. Thus, Gekkū-ryū passed down from generation to generation the secrets of striking pressure points with the fingers (yubi-jutsu), whilst Kotto-ryū specialised in pain holds, fractures and dislocations (koppō), and also practised the art of hypnosis (saimin-jutsu). The influence of Indian yoga was particularly evident in the physical training system of this school. Kyushin-ryu was renowned for its masters of the spear, sword and

javelin. The Shinshu-ryu ninja, nicknamed
'Transparent Waves', and their counterparts from the Jōshū-ryū – 'Raging Waves', from the Rikuzan-ryū – 'Black Windings', and from the Kōshū-ryū – 'Wild Monkeys'.

No ninja, not even the most experienced, well-versed in the secrets of hypnosis and black magic, ever set out on a mission without
a 'gentleman's kit' of weapons and technical equipment. The ninja were, if not the inventors, then at least active users and modernisers of all manner of bladed weapons (primarily miniature and concealed types), as well as explosive devices and military engineering contraptions.

Weapons training for ninjas, as in samurai families, began in early childhood and ran alongside general physical training. By the age of fifteen, young men and women were expected to have mastered, at least in general terms, up to twenty commonly used types of weapon. Two or three types, such as a dagger and a sickle or a club and a knife, were considered 'specialist' weapons. These were ceremonially presented to the initiate during the rite of initiation into the clan. Here, the ancient law of kempo applied, according to which any weapon, if wielded with mastery, could provide reliable defence against an enemy armed to the teeth – including, of course, one's bare hands.

The ninja's arsenal comprised three categories of weapons: hand-to-hand combat weapons, projectiles and chemical substances, including explosive mixtures.

The first category included, in addition to swords, spears, halberds and pikes, a host of little-known items, the choice of which was always determined by three qualities: lightness, portability and functionality.

Unlike samurai, ninjas generally used a single large sword (ninja-to), which they carried in a scabbard strapped to their back. This sword, like many other items of ninja equipment, was a versatile multi-purpose weapon, resembling an ingenious 'penknife'. Externally, the scabbard and hilt were very simply designed and painted in a camouflage colour. Sometimes the sword, stripped of its guard, was disguised as an ordinary staff. The scabbard was considerably longer than the blade and had a hole at the end, which allowed it to be used as a breathing tube when

it was necessary to hide underwater or as a tube for firing small poisoned arrows. Furthermore, secret dispatches, cords with coded knots and other useful trifles were concealed within the scabbard. By attaching the sword to a beam or a tree branch using a rawhide strap, it could be used as a trapeze and as
a ‘perch’ for a long wait. If it had a guard, the sword became a convenient step, which could then be pulled up by the strap.

The ninja’s favourite weapon was the combined sickle (kusarigama). Attached to the handle of an ordinary sickle—which, in the Japanese-Chinese variant, resembled a miniature scythe with a substantial forged blade—was a long, thin chain with a weight at the end. There were two types of sickle: the peasant version – with a short, curved blade – and the military version – with an elongated, sword-like blade. The handle was made from hard wood with a metal ring for the chain. The codification of kusarigama-jutsu is attributed to the renowned martial arts master and Buddhist monk Jion (16th century), founder of the Isshin-ryu school. Subsequently, the kusarigama was incorporated into the curriculum of several dozen ryu and enjoyed popularity amongst the samurai class.

The range of the weighted chain could extend to several metres, giving the kusarigama wielder a significant advantage. A well-thrown chain could completely entangle an opponent, paralysing their movements, or wrap round their sword-wielding arm, preventing an attack. Furthermore, the weight could be used to stun an opponent or inflict serious injury. After ‘throwing’ the chain, the sickle would be brought into play. The most difficult aspect of kusarigama-jutsu was the throwing of the chain – maki. Mastery was only achieved after several years of training.

For ninjas, the sickle with a long chain also served as an ice axe during climbs, a suspension bridge and a hoist. However, the most intriguing item in the entire arsenal of bladed weapons was a specific ninja tool called the keketsu-sege. This ingenious device resembled a dagger with two blades, one of which was straight and double-edged, whilst the other was curved like a beak. Attached to the hilt was a very long, thin and light cord made of horsehair or women’s hair, with a loop or a metal

ring at the end. The keketsu-sege found a wide variety of uses in ninja operations and served as an important aid in situations where larger weapons were unsuitable. It could be used as a dagger, with the curved blade helping to catch the enemy's sword in the fork and wrench it away by twisting it around its axis. It could also be used as a throwing knife or as a grappling hook to 'dismount' horsemen. When swung from a distance of one and a half to two metres, the keketsu-sege successfully rivalled the spear and halberd. By throwing the hook onto a wall, one could easily climb up the rope and descend just as easily, without breaking the silence with a jump. The same rope could be used to bind, entangle or strangle an enemy. When crossing turbulent mountain rivers and gorges, the rope was secured to a tree, and the hook was cast to the opposite bank. The metal ring could be used either as a fastening, slipped over a sturdy branch, or as a means of quickly ferrying goods and people by sliding whilst suspended.

An indispensable companion for the ninja was a coil of ordinary horsehair rope with a small weight at the end (musubi-nawa), intended both for 'entangling' an enemy from a distance and for setting intricate traps.

Female ninjas, who often infiltrated the retinues of powerful daimyo disguised as seductive aristocratic ladies, had their own, quite original weapon. Their voluminous hairstyles were adorned with elegant hairpins in the form of miniature daggers up to 20 cm long – kansas. With such a hairpin, it was possible to pierce the throat of a lord sleeping in his bed of love in the blink of an eye. The hairpins could also be used as throwing knives.

A pole (bo) and a club (ze) worked wonders in the hands of a ninja. Any stick that came to hand became a deadly weapon. Each school of ninjutsu cultivated its own unique fighting techniques. The art of fencing with a club and a dagger simultaneously was also very popular. With the dexterity of jugglers, ninjas wielded the short stick – the tanze (yawara) – sometimes in pairs; it was an excellent weapon for parrying a sword and delivering thrusts to the opponent's nerve centres.

Ninja did not merely use the bo staff for self-defence, but also made significant improvements to its simple design. First and foremost, a model of a hollow staff was developed, with a blade or a thin, long chain weighted with a sinker (shinobibuzu) fitted inside it. A smaller version of such a staff, in the form of an innocuous bamboo stick, was called
'spy shell' (shinobikai). A model of a telescopic bamboo pole with a tip shaped like a small hoe, known as the 'bear's paw' (kumade), also appeared. Such a pole could serve as a weapon, but was more often used as a pole – for climbing to heights and for hauling objects. It could also be used to leap over a wall four to five metres high. When extended, the pole reached precisely this height. The sections were firmly locked in place when extended, whilst when folded they formed a half-metre-long tube that could easily be concealed under clothing.

A device designed to facilitate climbing the sheer walls of castles – hand 'climbing irons' – was often used as a weapon. These consisted of a lightweight version of an iron knight's gauntlet with a strap fastening and fingers shaped like claws, curved downwards. Sometimes an additional row of spikes was attached across the palm. With such a gauntlet, one could confidently parry a sword blow and counter-attack with the other hand. A more primitive variant of the same weapon was the 'cat's paws' (nekode) – 'claws' worn separately on the fingers.

One of the most important aspects of a ninja's work was defeating the enemy from a distance, which is why great attention was paid to the art of archery and throwing small objects. Most often, spies would take a small, 'half-sized' bow (hankyū), no more than forty to fifty centimetres long, with them on a mission. The arrows were of a corresponding size and were often coated with poison. Although the arrow did not travel far, its lethal power was quite sufficient to kill a victim when fired from a window into a room or from a fortress wall at a sentry on a tower.

Poisoned needles fired from a blowpipe similar to the Indonesian sumpit (fukibari-jutsu) flew approximately the same distance. The miniature blowpipe, complete with a set of needles, was very convenient to carry in an inside pocket.

When fleeing from pursuers, a ninja would sometimes throw projectiles at them, but more often scatter iron spikes (tetsubishi) along the road – the equivalent of the Russian and European ‘garlic’. Wounds from such a spike were extremely painful and would incapacitate a person for a long time.

A more effective offensive and defensive weapon was the shuriken – a thin steel plate in the shape of a gear, a cross or a swastika with sharpened edges. A variant of the shuriken was flat, round or faceted steel darts sharpened on both sides. Shurikens were usually carried in a set of ten (nine being a sacred number) in a special leather case tucked under the arm. There were various methods of throwing shurikens depending on body position and distance to the target, but most often the flat
‘stars’ were thrown, like cards from a deck, with minimal effort, using a flick of the wrist. A direct hit with a shuriken was fatal. The purely psychological impact of these sinister metal discs, shaped like magical symbols and which, moreover, sometimes whistled as they flew, was also considerable.

It should be added that ninjas were also skilled at using ordinary stones, hurling them at an enemy’s eye or temple.

With the advent of firearms, the ninja began to use primitive homemade pistols, which fired buckshot from a distance of fifteen to twenty metres. Another type of
‘firearm’ was a peculiar type of matchlock made of wood and papier-mâché, which also fired buckshot but was intended more to intimidate the enemy.

Disguised as a wandering monk, a peasant, a priest or a circus performer, ninjas wore a wide-brimmed conical hat made of rice straw (amigasa) during the day – a very practical headdress that completely covered the face. However, in addition to providing camouflage, the hat could serve another purpose.

A massive, curved blade attached from the inside ‘under the brim’ transformed it into a giant shuriken. Thrown by a skilled hand, the hat could easily cut through a young tree and sever a person’s head from their torso, much like a guillotine.

Ninja, who had long been regarded by the people as masters of alchemy, displayed great ingenuity in the preparation of poisons and explosive mixtures. For instance, a miniature hand grenade (nage-

teppo) could, if necessary, hold off pursuers. Furthermore, magnesium mixed into the gunpowder produced a blinding flash. Taking advantage of the temporary ‘blindness’ of those around him, the spy would instantly ‘dive’ under their feet and find himself up a tree or behind the nearest hedge. The nage-teppo was one of the most effective aids in the legendary ‘disappearances’ of the ninja, which struck the samurai with superstitious terror.

The prototype of the nage-teppo was a Chinese gunpowder projectile (te-pao) with a casing consisting of two iron hemispheres joined together. The earliest references to the te-pao date back to the 12th century. By the time of the invasion of the Japanese islands in the late 13th century, the Mongols were already making active use of them. It is most likely that the secrets of manufacturing grenades and mines were brought to Japan from the mainland by prisoners of war from Kublai Khan’s two failed campaigns and by Buddhist pilgrims. There is also detailed information on the chemical composition of such grenades. For example, the following components were used to produce a projectile emitting poisonous smoke: sulphur, saltpetre, aconite, the fruits of the creton tree, henbane, tung oil, xiao-yu oil, charcoal, black pitch, arsenic, yellow wax, bamboo fibres and sesame seeds. The casing was sometimes made from an empty eggshell or clay. A short wick was inserted inside.

Potent powdered toxic chemicals were widely used in ninja practice. Some of these, in the form of a crumbly lump, could be thrown into an opponent’s eyes or sprayed from a blowpipe, leading to partial or complete loss of sight. Others were designed to affect the respiratory tract. They could be used to render an enemy unconscious or induce a comatose state. When scattered on the ground, these substances threw dogs off the trail.

‘Anti-infantry’ mines – udzume-bi – inflicted heavy casualties. These were usually placed along a potential retreat route, carefully concealed beneath branches or a layer of earth.

In large-scale operations where heavy firefights were expected, ninjas used a small, thick, very light and sturdy leather shield (neru-kawai) to protect themselves from bullets and arrows.

A ninja setting out to gather intelligence at a fortress would have had to take with him a set of locksmith's tools, such as a crowbar with a fork at one end, a drill, a chisel, lock picks or a knife, a gouge, and so on.

A variety of portable devices were used to cross water barriers: a folding straw raft, a small boat, or a rope stretched underwater in advance. One curious device was the uki-gusa – a folding cylinder made of oiled paper on a frame of fish bone, with a tightly sealed opening at one end. In calm weather, without fear of being spotted, a ninja could use this strange contraption as a floating lantern by first placing a candle inside. But with the opening sealed, the 'lantern' became a buoy on which a person could sit quite comfortably. Uki-gusa were also used for transporting and storing heavy loads on or under the water.

Among the ninja's inventions, ingenious in their simplicity, one cannot fail to mention the 'water skates' (mizugumo) – small water skis or rafts woven from a thick layer of straw or reeds. These 'skis' allowed one to glide across the smooth surface of the water without getting one's feet wet, which gave rise to tales amongst samurai and peasants of the ninja's supernatural ability to 'walk on the sea as if on dry land'. Of course, mastering the technique of mizugumo was more difficult than getting the hang of a surfboard, but ninjas always had a penchant for acrobatic feats. However, sometimes the illusion of walking on water was created by submerged rocks and shoals, the locations of which were known only to the ninjas.

To cross open bodies of water, particularly castle moats, a ninja would carry a breathing tube (mizuzutsu). To avoid attracting attention with a specialised bamboo stick, an ordinary smoking pipe with a long, straight stem was often used as a mizuzutsu. With the aid of the breathing tube, it was possible to swim, walk or sit (with a load) underwater for a long time. A sword scabbard or simply a reed plucked from the water could also serve as a substitute for the tube, with its tip protruding above the surface by just a few millimetres and being completely invisible from the side.

It goes without saying that, in order to carry such a quantity of weapons and technical equipment, a ninja had to have a well-designed ‘disguise’. The outfit for night operations consisted of a shirt-like garment, a jacket with a belt, trousers resembling narrow harem pants, a hood, leg wrappings and soft shoes. The jacket and trousers were made of durable canvas, securely stitched at the seams and dyed black. The reverse side, which was also suitable for use, was brown or dark blue in colour, making it invisible at night. Both the jacket and trousers were replete with all manner of pockets, pouches, cases, loops and hooks for weapons and equipment. The hood with a visor served mainly to conceal the face, but could also be useful as a water filter or a respirator in a smoke-filled room. The shoes, with a split toe for the big toe, were lined with canvas, and sometimes with leather or tarred canvas, which provided the necessary grip when scaling a wall. Thin metal plates were sometimes sewn into the sleeves of the jacket to deflect sword blows, whilst a thin dagger was fastened to the forehead, beneath the hood. All the clothing could be shed in a matter of seconds to slip away from pursuers or to deceive them by creating a decoy.

Trained and equipped in this way, the spy was ready to carry out any task, however impossible, and, if the duty of honour demanded it, to give his life for a high price.

The theory and methods of military espionage had been formulated at least a thousand years before Prince Setoku Taishi, for the first time in Japanese history, made use of the services of a professional ninja spy. Ever since Chinese culture reached the Japanese islands in the 5th–6th centuries, every self-respecting military commander and statesman kept a copy of the treatise by the great ancient strategist Sun Tzu in a place of honour in their personal library. The Zenin, leaders of the ninja clans, also guided their operations by this instructive book, and in particular by the chapter entitled ‘The Use of Spies’. Sun Tzu attached exceptional importance to spies, considering their work to be the key to a military force’s victory in any campaign. We shall quote here, with some abridgements, the aforementioned chapter, which reflects not only

the structure and organisation of the ninja spy network, but also their relationship with their employers – the daimyo.

" – …Knowledge of the enemy's position can only be obtained from people.

– Therefore, there are five types of spies: local spies, internal spies, double agents, spies who risk their lives, and spies who do not risk their lives.

– All five categories of spies are at work, and their methods cannot be known.

This is called an unfathomable mystery. They are a treasure for the sovereign.

– Local spies are recruited from among the inhabitants of the enemy's country and utilised (these are ordinary informants, not ninjas in the true sense of the word. – A. D.); internal spies are recruited from among the enemy's officials and utilised (these are also informants who sell information and are not ninjas. – A. D.); double agents are recruited from the enemy's spies and utilised. When I set a deception in motion, I inform my spies of this, and they pass it on to the enemy. Such spies will be spies of death. Spies of life are those who return with a report.

– …Subtlety! Subtlety! There is nothing in which spies cannot be utilised.

– If a spy's report has not yet been sent, but word of it has already got out, then both the spy himself and those to whom he reported it shall be put to death.

– In general, when you wish to strike at the enemy's army, attack his fortress or kill his men, you must first find out the names of his commander-in-chief, his aides, his chief of security and his guards. Instruct your spies to find out all this without fail.

– If you discover that an enemy spy has infiltrated your ranks and is watching you, be sure to entice him with benefits; bring him into your inner circle and keep him in your service. For you will be able to turn him into a double agent and make use of him…

– The sovereign himself must personally oversee all five categories of spies…

– …Only enlightened rulers and wise commanders know how to recruit men of great intellect as their spies, and in this way they invariably accomplish great deeds. The use of spies is the most essential aspect of war; it is the pillar upon which the army relies."

Sun Tzu's ideas have been repeatedly commented upon and enriched with examples from the history of China and neighbouring states; consequently, the feudal rulers of Japan and the upper echelons of the ninja hierarchy drew not only on the treatise's concise theses, but also on voluminous works containing specific guidelines and recommendations.

Without dwelling in detail on the strategic aspects of using espionage in civil wars, we shall merely note that ninjas quite rarely acted alone, at their own risk. As a rule, all their operations were carried out within the framework of an extensive espionage network comprising informants (informers, agents, liaisons, saboteurs and, finally, cover forces).

From an exotic perspective, ninja saboteurs are undoubtedly the most fascinating. According to Sun Tzu's classification, they are 'spies of life'. Yet they would sometimes, whether voluntarily or under duress, become 'spies of death', sacrificing themselves to assassinate a particularly important figure or to capture an impregnable stronghold.

The tactics of ninja saboteurs boiled down to diverting the enemy's attention in various sectors by moving swiftly to deliver unexpected strikes (for example, taking out a sentry) and sowing panic amongst the enemy ranks through large-scale acts of sabotage (setting fire to food stores, poisoning the fortress well, assassinating a military commander, and so on).

The most difficult part of a ninja's risky missions was infiltrating the castle. Any means were used to achieve this. They might bribe a sentry, get a job, offer their services as a martial arts instructor or even as a spy. They might try to pose as a wandering monk, an actor or a magician, feign illness, or blend unnoticed into the ranks of enemy soldiers. However, all these ruses suffered from one drawback: the enemy's counter-intelligence kept a watchful eye on the newcomer, and the very first attempt to gain access to secret documents or the prince's chambers could prove to be one's last. Brave spies, well-versed in the intricacies of their craft, would sometimes resort to a deadly but foolproof (if successful) tactic: allowing themselves to be captured with the intention of escaping. History has preserved many examples of such desperate ventures.

The Tokugawa authorities ordered an experienced ninja named Tonbe to track down and kill his fellow ninja, Kaei Jūzō, who had entered the service of the conspiring princes. Recognising his old friend and classmate in the intended victim, Tonbe set aside his professional honour and refused to kill him. After consulting with one another, they devised a plan that would satisfy both warring parties. Tonbe took Jūzō to the shogun's residence and reported that the enemy had been captured alive. The shogun immediately ordered the scoundrel to be executed, but Jūzō begged for permission to take his own life. The shogun and his entourage, intrigued by the spectacle that lay ahead, made themselves comfortable in the hall, and the unfortunate Jūzō was handed a short, blunt knife. As the ninja might not have observed every subtlety of the harakiri ritual, Jūzō chose not to give himself away and merely plunged the knife into his stomach up to the hilt. His clothes were soaked through with blood; the dying man twitched several times before collapsing onto the floor. The corpse was thrown into the castle moat, whilst the shogun and his entourage held a banquet to celebrate the successful conclusion of the operation. That very night, the castle was set alight from various sides. The cunning Jūzō, instead of committing harakiri, slit open the belly of a strangled rat, which he had previously tucked into his belt. Having waited in the moat until darkness fell, he took advantage of the sentries' inattention to sneak into the castle—which he had managed to scout out during the day—set it alight, and slipped away unpunished.

Of course, such exploits required extraordinary composure and dexterity. Had anyone noticed the deception, the audacious ninja would have been subjected to exquisite torture, and finally his head would have been sawed off with a blunt bamboo saw.

More often than not, infiltration of the castle took place 'naturally', that is, in complete secrecy and under cover of night. The ninja would stage a sort of competition, storming the walls of the most impregnable castles in the darkness. Here, for example, is how the stronghold of the Suwa daimyo was captured.

Suwah Castle stood on a hill and was surrounded by a deep moat. A single watchtower dominated the massive fortress walls, offering a view of all the fortifications and the inner courtyard. At night, the walls were illuminated, making it impossible to approach them. So the resourceful ninja Kato Tanzo of the Koga clan devised a plan to capture the watchtower itself. That night, with

the aid of ‘climbing irons’ scaled the sheer wall to the tower’s platform, which jutted out over the moat – the only spot that lay outside the sentries’ field of vision. Clutching a beam with one hand, Kato pulled out a drill with the other and bored two holes in the wooden floor of the platform. Bolts with split heads were silently inserted into them, and ropes were attached to the bolts. Kato’s assistants, who were waiting below, climbed up at his signal and took up positions on
‘swinging’ right beneath the sentries’ feet. What followed took mere minutes. Having determined the direction in which the sentries were moving by the sound of their footsteps, the ninja scaled the tower’s parapet in a single bound and silently dispatched the guards. The castle was now at their disposal. Setting fire to the barracks and the gunpowder store sealed the outcome of the operation.

In all their actions, the ninja had to remain, as far as possible, invisible and inaudible to the enemy; therefore, ninjutsu developed classic methods of concealment for all circumstances, the so-called five methods of camouflage (go-ton-no jutsu):

1. Use of Trees, that is, vegetation: Mokuton.

– Camouflage in grass (kusa-gakure). Tall grass – taller than a person – and low-growing shrubs, which abound on the plains of Japan, have always provided ideal cover for manoeuvres. Even in broad daylight, one could walk unnoticed through such grass. Furthermore, after prolonged observation, a ninja could ‘transform’ himself into a lush green bush or a marshy mound topped with brown moss.

– Camouflage in the manner of a badger – tanuki-gakure.

This technique involved using trees in various ways. For example, one could find reliable shelter from prying eyes in the hollow of an old tree, invisible from below. One could hide in a spreading canopy or climb a tree and, whilst pursuers were closing in, use vines or pre-stretched ropes to make one’s way to safety.

2. The use of Fire – ka-ton.

– A diversionary fire – hi-tsuke. This reliable method was used very frequently to inflict damage on the enemy whilst simultaneously diverting their attention from the route the ninja intended to take.

– Hand grenades or flash bombs – hidama. These were used when it was necessary to shake off pursuing guards; sometimes they were thrown or placed in a bonfire or brazier. The lethal power of these infernal devices was limited, but their shock effect was immense.

– Signal firecrackers – raika-dama – were usually scattered around the camp or the target of the sabotage operation and set off using a system of fuses, which an enemy scout or sentry would inevitably trip over.

– Poisonous and tear-gas agents for cover – dokuen-gakure – proved effective both during a retreat and when it was necessary to silently kill or paralyse several people in an enclosed space.

– 'Devil's Flame' – oni-bi-gakure – was a simple illusionist trick involving the blowing of fire. A ninja performing the oni-bi whilst wearing a grotesque devil's mask would often send pursuers fleeing in panic.

3. The use of the earth and earth-related objects (walls, stones, statues, etc.) – ji-ton.

– Camouflage using the 'newt method' – imori-gakure – involved the ability to 'stick' to a wall, rock or mound of earth, blending completely with the surface.

– 'The scarecrow method' – kakashi-gakure – involved the ability to mimic, in darkness or semi-darkness, the outlines of familiar objects in the landscape: a garden scarecrow, a statue, a stone lantern in a park, and so on.

– The 'quail method' – uzura-gakure – involved curling up into a ball and pressing oneself against the ground, mimicking a tuft of grass or a stone.

4. The use of metal, that is, metal objects to divert attention – kin-tom.

– Creating false noises in some distant corner of the castle using unwound twine – kama-gakure (from the word kama – metal household utensils). Upon hearing the clanging of iron, the guards would rush towards the sound, leaving the passage to the inner chambers open.

– Throwing copper coins – do-gakure – often helped to shake off pursuers on a crowded street. By flinging large copper coins one after another, the fugitive created a commotion

among onlookers and beggars, who would scramble to catch the coins, whilst at the same time potentially blinding the most zealous pursuer.

5. The use of Water – sui-ton.

We already know that a trained ninja felt as much at home in this element as a fish in water. The most popular methods of camouflage were:

– the 'turtle method' (kame-gakure), which allowed for prolonged stays underwater with a snorkel;

– the 'seaweed cover' – ugikusa-gakure – which allowed one, for example, to drift downstream unnoticed.

If a scout was taken by surprise and forced to dive into the water without any prior preparation, a hood or any piece of cloth would come to the rescue. A large air bubble could be drawn into it to stay at the bottom for five to seven minutes whilst pursuers combed the surrounding area.

Thus, the 'Five Methods of Camouflage' were based on the principle of correspondence with the five elements: Wood, Fire, Earth, Metal and Water. It was believed that a ninja who had mastered all five methods to perfection, and learnt to combine them in various situations, had grasped the idea of Being, expressed in the interrelationships and metamorphoses of the primordial elements, and was assured of success in any endeavour. However, as the Japanese proverb goes, 'even a monkey falls from a tree'. None of the spies setting out on a mission were immune to failure, for they often faced an even more experienced and cunning ninja as their opponent. A case in point is the tragic story of Sasuke, nicknamed Sarutobi (Leaping Monkey).

From childhood, Sarutobi trained under the most gruelling regime, particularly in the art of 'manipulating vegetation' (Mokuton) – he would climb trees with dizzying speed, run along branches, swing and leap from vine to vine, just like a real monkey. He learnt – or perhaps even invented himself – the monkey-style kempo, an extremely agile and powerful art. Immersing himself in this 'role', he spent long periods living in the trees and eating the food of monkeys, yet never neglected to master the secret traditions of the yamabushi. Eventually, Sarutobi became an indispensable scout, brilliantly carrying out the most dangerous missions. Once, a rebellious daimyo, plotting a coup d'état,

, sent the Leaping Monkey to the shogun's palace on a reconnaissance mission. Having successfully eavesdropped on the plans of the enemy commanders, Sarutobi prepared to make his retreat. He slipped out of the room unnoticed and scaled the fortress wall, but as he leapt down, he STEPPED INTO a bear trap. Realising he could not free himself, the ninja bravely severed his leg at the ankle with his sword, bandaged the wound and attempted to continue on his way, but his pursuers were already close behind. Then, weakened by blood loss, Sarutobi hurled a final curse at his enemies and slit his own throat.

Concerned by the absence of their best agent, the conspirators sent another ninja in his wake. Having infiltrated the shogun's residence, he found the guards on high alert, and a short while later a figure dressed in black flashed past him in the darkness. The stranger crept up on the two sentries on the wall and soon stabbed them with a dagger. Satisfied, the spy returned unhindered to the rebels' headquarters and reported that Sarutobi was sowing panic amongst the enemy troops. But at that very moment, the castle was surrounded by government troops and taken by storm… Hattori Hanzō, commander of the ninja forces in the shogun's army, managed to lead the rebels to safety by impersonating the slain Sarutobi.

Even more instructive is the story of the assassination of the powerful daimyo Uesugi Kenshin, who contested the right to supreme power in the country with Oda Nobunaga and Takeda Shingen. The entire Uesugi intelligence service was concentrated in the hands of Kasumi Danzō – and it was he whom the four secret assassins sent by Oda had to confront. The assassins managed to lie in wait in a dark corridor for Kasumi and his three companions, who were on guard duty. Ukifune Kempachi, a master of fukibari-jutsu, fired a volley of poisoned needles from his pipe at them – all four were killed instantly. Armed with the same weapon, Ukifune made his way to the prince's bedchamber and had just raised the pipe to his lips when a pair of powerful hands seized him and, with a precisely calculated jerk, snapped his neck… As it turned out, Kasumi had merely feigned death, having managed to dodge the deadly needles. But Kenshin, falsely reassured, took comfort in the thought that he had rid himself of his most vicious enemy. In vain had the far-sighted Kasumi set traps in the castle's dark passageways. That very night, a relative of the hapless poison-dart thrower, Ukyiune Jinnai—a dwarf,

standing just over three shaku (about one metre) tall but physically well-developed, infiltrated the enemy stronghold and lay in ambush. For many years, he had prepared himself for all manner of delicate missions by spending long periods sitting in a cauldron of liquid clay. Having made his way into the castle, Jinnai made himself comfortable in the prince's latrine (cesspit) with a spear and a breathing tube. When the prince arrived in the morning to relieve himself and crouched over the round hole in the floor, Jinnai emerged from his hiding place and thrust his spear right up into the lord's throat. The guards, who had rushed in at the sound of the commotion, found no one, for Jinnai, having done his deed, had sunk to the bottom. Some time later, having made his escape from the castle and washed himself thoroughly, he was already recounting his adventures to a satisfied Oda Nobunaga.

Ninja tactics were not limited to arson, assassinations, explosions and poisonings. It was not uncommon for 'biological weapons' to be used to capture particularly important fortifications – animals (dogs, cats, monkeys, etc.) suffering from rabies or infected with epidemic bacteria, sometimes trained for this purpose. This method of sabotage was known as the 'spy decoy'. The following historical anecdote gives some idea of how it worked.

On one occasion, Hajika Jūbei, a spy in the service of Lord Takeda Shingen, decided to get rid of his sworn enemy, Sandai-fu Momothi. Having sneaked into Sandaihu's house and made sure he was fast asleep, the bloodthirsty Hajika released several dozen rabid, starving weasels from a sack. But just then, Sandaihu 'woke up'—having clearly already been warned of the impending assassination attempt—and hurled a handful of rat droppings at his opponent. The weasels, drawn by the scent of the rats, mauled the overly resourceful assassin to death.

In addition to purely terrorist acts, ninja saboteurs were also deployed as military commandos during operations on land and at sea. During the storming of fortresses, whilst the main body of troops was launching the assault, the ninja were often tasked with breaking through to the interior to open the gates or to draw the besieged forces' attention away from the main attack. Various mechanisms were employed for this purpose. For example, under cover of night, a huge 'yagura' wheel—constructed from light wooden poles with small

planks arranged like steps around its circumference. One after another, the ninja would leap very quickly from the top of the rotating ‘devil’s wheel’ straight onto the wall. A wheel of the same type, but with reinforced compartments, was designed for continuous fire against the enemy on the castle walls and in the inner courtyard. The catapult – the toteki-sha – also operated on the same principle as the wheel. The ninja manoeuvred the battering ram under the cover of a shield made of ox hides mounted on a sturdy portable frame. During field operations, ninjas would sometimes ‘descend’ a gentle hillside in self-propelled carts with wooden cabins – dairin-sha. The huge wheels gave the carts stability and prevented them from overturning on the descent. The enemy could be fired upon from the embrasures in the walls of the cabins. A large number of such ‘armoured vehicles’ were usually sent ahead of the infantry with the aim of sowing confusion in the enemy’s camp and depriving them of the initiative.

At times, a landing force would be dropped behind enemy lines using giant paper kites – tako. As such operations took place at night, the entire contraption came to be known as the ‘night kite’ (yami-dako). A ninja suspended by slings could conduct prolonged surveillance of the enemy camp, fire upon it from the air or throw hand grenades at it; but, most importantly, with a bit of luck, it was possible to land directly on the roof of a castle from such a kite. The same kite, tethered in a concealed spot, also served as an emergency means of escape. It was not uncommon for whole squadrons of paper kites, bearing a scarecrow or a human figure painted on the underside, to be launched into the sky to divert the enemy’s attention from the direction of the main assault.

An even more ingenious invention was the ‘eagle men’ (hito-washi), who carried out mass incursions into enemy territory. A primitive sort of hang glider with a harness was constructed from bamboo, paper and ropes. The ninja himself would lie face-down on the frame, slipping his arms into the fastenings beneath the wings. The launching device consisted of several bamboo stakes or tree trunks cut to a certain height, pulled back by a rope. As soon as the secured end of the rope was released, the glider, propelled by a powerful spring, would hurtle down the hill towards the enemy positions. Of course, during the day the ‘eagle men’ became easy prey for enemy archers on guard duty, so the flights were carried out, as with kites, under cover of darkness. At sea, the activities of

often descended into outright piracy. In times of peace, when rebellious feudal lords had no need of their services, scattered groups of
of ‘sea’ ninja would criss-cross the Inland Sea in their small, nimble boats, raiding coastal villages and plundering merchant barges and government vessels. These sea bandits – the Funa-Kainin, or Fuma-Kainin, as they were called in honour of the famous pirate Fuma Kotaro – were almost impossible to catch. The pirates’ ‘dragon boats’, with their hermetically sealed decks, could submerge when necessary by taking on ballast. Underwater, they were propelled by a pedal mechanism. When these
‘submarines’ approached the enemy fleet, divers with long breathing tubes would emerge from a hatch in the hull, their task being to drill and saw holes in the enemy ships. Ballast was loaded through the same hatch and jettisoned upon surfacing. The breathing tube for the entire crew passed through the raised bow of the boat, which was shaped like a monster’s head, but this opening could also be closed – in which case the crew made do with their existing supply of air. Often, the ‘dragon boats’ would sail using ballast, submerged in the water but with the monster’s head raised high above the surface, spewing fire and smoke. Few sailors could look upon this sea monster without shuddering. However, the resourceful ninjas, led by Hattori Hanzō, found a way to combat the pirates in the name of the law. Having built fast ships with huge, pointed wheels along their sides, they would catch up with and cut the slow, unwieldy ‘dragon boats’ to pieces, whilst the surviving pirates were rounded up and executed.

It is no coincidence that the exploits of the ninja have provided the stuff of countless tales and legends; they are also celebrated in modern Japanese cinema. Their skill, honed by years of hard work, training and brutal battles, probably reached fantastical heights and seemed supernatural even to seasoned samurai. The fame of Shimotsuge Kizaru, the great leaper; Hachisuka Tenzo, who could dig tunnels with the speed and dexterity of a mole; Yamada Yaemon, the master of lightning-fast disguises; and Saji Gorobei, the conqueror of raging rapids, resounded throughout the land.

With the end of the civil strife and the rule of the samurai class following the ‘Meiji Restoration’ in 1868, the traditions of ninjutsu seemed to have been severed once and for all. The mountain strongholds of the ninja had largely been dismantled as early as the Tokugawa period. The descendants of these brave spies and ruthless assassins moved to the cities and took up peaceful occupations. Some elements of the ninja’s arsenal were adopted by military intelligence and the detective police, whilst others found their way into jujutsu and combat karate. However, the unique combination of physical, mental, technical and philosophical-religious training that characterised the medieval art of espionage has only been revived in modern times, on a commercial basis, at Hatsumi Masaaki’s school.

The thirty-fourth patriarch of the Togakure ninja school, a master of the highest rank in eight martial arts, Masaaki Hatsumi was born in 1931 in the town of Noda in Chiba Prefecture. During his school years, he was actively involved in karate, judo, boxing and other martial arts, although he did not achieve any particularly outstanding success in any of them at that stage. Hatsumi’s fate was decided by an unexpected encounter. In 1958, he met Hisaji Takamatsu, the last—and thirty-third—keeper of the secrets of the Tokakure school. The elderly master agreed to take the talented young man on as a disciple, and for fifteen years Hatsumi travelled once a week from Tokyo to the ancient city of Nara, where the master lived. Over the course of the week, he would work through the complex programme set for him as homework. Following Takamatsu’s death, having become the official heir to the school’s traditions, Hatsumi—following the example of most Kempō instructors—decided to make his art public. He opened a fee-paying ninja school—initially only for his compatriots, and later for foreigners as well.

HUMAN PHYSICAL RESERVES

Physical exercise, explains I. Muravyov, is the most powerful stimulus for developing the human body's potential.

Equally instructive is information about the motor abilities of people from various ethnic groups, tribes and nationalities, whose way of life and traditions differ significantly from our own. Studying their physical abilities is also interesting because, unlike the individual capabilities of a particular athlete, these abilities are usually characteristic of the entire population.

For example, the Tarahumara people (the word translates as 'fast foot'), who live in the Western Sierra Madre in Mexico, are renowned for their remarkable ability to run long distances. Tarahumara men are impressive in their physical prowess. In the mountains, competing against one another, they run over a hundred kilometres without stopping. When running, they use a unique form of 'weighting', tossing a heavy oak ball in front of them with the toes of their bare feet. The women compete in runs lasting several hours along paths that wind through rocky hills and, snaking through the thicket, cross mountain streams. The runners swing one arm gently, holding a stick with a rounded end, which they use to catch and toss a ring—woven from strong tree fibres—in front of them.

The Tarahumara run barefoot, unafraid of injuring their feet, which are accustomed to any terrain.

Y.V. Shanin's book *From the Hellenes to the Present Day* describes an instance in which a 19-year-old Tarahumara carried a 45-kg parcel over a distance of 120 km in 70 hours. A fellow tribesman covered a distance of 600 km in five days. A well-trained Tarahumara is capable of covering at least a hundred kilometres in 12 hours and can run at this pace for 4–6 days.

The swift-footed Masani, who inhabit the vast expanses of Kenya and Tanzania, possess remarkable physical abilities. Strong, brave and warlike, they suddenly

appear in places where they are not expected. The words mentioned in the prayers of the local farming tribes are characteristic: ‘Grant that none of us may encounter the Maasai, lions or elephants’. This is how the traveller Karl-Klaus von Decken recorded it in the middle of the last century. Yet even today, these words accurately characterise the fearlessness and strength of the Maasai – for even when encountering a lion alone, a Maasai will fight it.

Human physical capabilities are most vividly demonstrated during sporting competitions. From ancient times to the present day, sport has captivated people with the spectacle of the athlete’s physical perfection and movements, which enable them to achieve unprecedented results. Olympic champions were honoured on a par with the gods; odes and hymns were dedicated to them. The marathon reminds us of the feat of Philippides, one of the soldiers in the ancient Greek army, who in 490 BC ran a distance of several tens of kilometres from Marathon to Athens to report the Greeks’ victory over the Persians. The soldier ran the distance, giving not only all his strength but also his life…

Since then, the popularity of the marathon has grown considerably. Nowadays, women also compete over this distance (42 km 195 m). Moreover, it is not only athletes who train for the marathon, but also those who take part in recreational running in amateur running clubs.

However, for Alexander Komissarenko, an engineer from Tula, the marathon distance seemed insufficient, so he began training for the 100 km run. In 1980, the Tula native achieved this feat in a mass-participation event, covering 100 km in 8 hours and 1 minute. But even that did not seem enough to him. What if he stayed on the course for a whole day?..

Previously, Vladimir Dementyev, a fifty-year-old foreman at a metallurgical plant in the town of Nytva in the Perm Region, had covered 264 km in a day, which was recognised as the top All-Union achievement. A. Komissarenko broke this record, clocking a distance of 266 km 529 m in a 24-hour run. With his achievement, Alexander Komissarenko also broke the record set by the South African W.H. Hayward in Motsper Park, England. Over 24 hours – from 11.00 am on 20 November to 11.00 am on 21 November 1953 – Hayward covered 256.4 km.

It should be borne in mind that when comparing results achieved over ultra-long distances – 50–100 kilometres or more – the terrain, as well as air temperature and humidity, and wind strength and direction, play a significant role. This applies even more so to multi-day events, the results of which depend largely on the conditions under which they are organised, as well as on the participants' rest and nutrition. For this reason, record-breaking results in such competitions are not usually recognised. Nevertheless, they are of undoubted interest when it comes to assessing human physical capabilities. It is from this perspective that the result achieved by Stan Cotrell from Atlanta (USA) deserves attention: he ran 167 miles and 440 yards, or 269.2 km, in 24 hours. Thus, the first officially recorded result in the longest continuous run – the achievement of J. Saunder, who ran 22 hours, 49 minutes, 204 km and 638 m on a circuit in New York – has been left far behind.

The record for continuous walking is held by the 36-year-old Englishman M. Barnish, set in 1985. For 159 hours, he walked laps of a sports ground, covering a distance of over 650 km. According to the London newspaper *The Sunday Times*, M. Barnish's record did not come easily. Prolonged, monotonous walking whilst in a state of extreme fatigue, coupled with an overwhelming desire to sleep, led to a moment when the athlete, having taken off his shoe, attempted to use it to… 'answer' a phone call.

The world record for 24-hour cross-country skiing was set in the winter of 1980 by the Italian ski instructor Carlo Sala, who covered 161 miles in 24 hours. In the winter of 1982, the Canadian Pierre Véro set the record for the longest continuous cross-country ski walk. Véro remained on his skis for 83 hours and 2 minutes, surpassing the previous record set by the Americans Persell and McGlynn, who had skied for 81 hours and 12 minutes.

The Guinness Book of Records reports several ultra-marathon achievements set in the past. The longest distance covered during a six-day walking competition is 855.178 km. This record was set by George Litwood in Sheffield (England) in March 1882. The longest continuous walk, however, was achieved by S.A. Harriman, who walked

on a bet on 6–7 April 1883 in Traki (California, USA), covering 193 km 34 m.

The ultra-marathon achievements of the past pale in comparison to the successes of modern athletes. In 1984, the Greek runner Yannis Kouros broke the unofficial world record for continuous running, which had been set 96 years earlier. Over six days of running, he covered 1,022 km 800 m, averaging 170.5 km per day.

The longest officially monitored race walking event, covering 5,496 km from New York to San Francisco, took place in May–July 1926. The first person to complete this distance was 60-year-old A.L. Monteverde, who took 79 days, 10 hours and 10 minutes to make the journey. He covered an average of 69.2 km each day.

The greatest distance ever covered on foot by a person is 29,775 km. The route of the journey, which lasted over a year (81 weeks), passed through 14 countries, from Singapore to London. On 4 May 1957, 22-year-old David Kwan completed this distance, covering an average of 51.5 km per day.

A number of unique achievements by runners demonstrate the remarkable physical capabilities of the human body. The longest distance – over 5,810 km – was covered in 1929 by the American Johnny Salvo during a transcontinental run from New York to Los Angeles. It took him 79 days (from 31 March to 17 June). His total running time was 525 hours, 57 minutes and 20 seconds, which equates to an average speed of 11.04 km/h. The total distance covered over 43 years by the Englishman Kenneth Bailey, who ran mainly at night when the streets and roads were free of traffic, amounted to 206,752 km. This distance is more than five times the circumference of the Earth.

The American general practitioner Theodore Corbit holds the undisputed world record for participation in marathon races. Over a period of 30 years – from 1951 to 1981 – he successfully completed the marathon distance 147 times. If we add to this his participation in 51 races covering distances of over 30 miles, it follows that Dr Corbit covered a total distance of 9,842 km in competitions. And taking into account his daily training sessions, the total distance he covered whilst running should be increased to 193,116 km.

In August 1875, 28-year-old Captain Matthew Webb of the British merchant navy became the first person to swim across the English Channel from Dover to Calais in 21 hours and 45 minutes. Captain Webb's performance was so impressive that 36 years later, in September 1911, another British athlete, who had been training specifically to cross this strait (22.5 km), only managed to do so on his thirteenth attempt, though he did not surpass Webb's speed. It is worth noting that these days, swimming across the English Channel has become commonplace. The Englishman M. Reed, for example, by 1981, when he turned 39, had already swum the distance between England and France 20 times. Having completed four successful swims from Dover to Calais in 1981, he was awarded the title of 'King of the English Channel'.

In 1986, for the first time in history, a swim across the entire length of Lake Geneva – 72 km – was organised. The 34-year-old Swiss swimmer Alain Charme covered this distance in 22 hours, 42 minutes and 30 seconds at an average speed of over 3 km/h.

Bulgarian swimmer Dobri Dinev holds a whole cascade
'extremely difficult' records to his name. It is well known that the most difficult swimming stroke is the butterfly, in which the arms, like the fluttering of a butterfly's wings, sweep simultaneously through the water. This makes the butterfly stroke so demanding that the maximum distance in competition is 20 metres, whereas in freestyle, where the arms are moved through the air alternately, the distance is 1,500 metres. Dobri Dinev, however, swam 25 km using the butterfly stroke, covering this distance in a 500-metre pool in 9 hours 36 minutes 35 seconds, and subsequently swam an even greater distance – 40 km. His world record in mixed-style swimming over 100 km, completed in 38 hours 31 minutes, is almost two hours faster than the previous record for this distance held by the French swimmer Philippe Daven, against whom Dobri Dinev competes in absentia.

Here are a few achievements in cycling, which is the most popular sport in the world. According to UN data from 1986, there were 420 million cyclists worldwide, with only 3 per cent of them using their bikes exclusively as a means of transport, whilst 97 per cent used them for sporting and health purposes.

'Cyclists' Festivals' in various cities attract hundreds of thousands of participants. For instance, at the most recent, ninth, festival in Madrid, 350

thousand – a veritable sea of cyclists, including the city's mayor, Juan Barranco – filled the squares and streets of the Spanish capital.

The longest distance for a one-day road cycling race is 265 miles (426.47 km). This is the distance from London to Holyhead. The course record was set in 1965 by cyclist Tommy Simpson, who covered the distance in 10 hours, 49 minutes and 4 seconds. However, by 1986 this achievement had been left far behind: 37-year-old American cyclist John Howard can boast that in a single day he covered 822 km on his own – without a pacemaker to smooth the way. Incidentally, it was he who also set the record for the fastest cycling speed. In the summer of 1985, on the surface of the dried-up Lake Bonville in the USA, he reached a speed of 243 km/h! The cyclist set this record by first accelerating his bicycle to 100 km/h with the help of a car towing him. He then unhooked the tow rope and pedalled, using pedals connected to a specially designed gear system. The risk of a crash increased dramatically as a result. As Howard admitted, on two occasions he only narrowly avoided a fall that could have ended tragically. And it was only on his seventh attempt that he reached a speed of 243 km/h. John Howard was a remarkable cyclist with vast experience in competitive sport. He represented the US national team three times at the Olympic Games in 1968, 1972 and 1976. The record for the longest continuous cycle ride – 125 hours – was set by 22-year-old Indian Anaandrao Galialkar. On 14 April 1955, in a park in Bombay, he began his ride, which he finished at 6 pm on 19 April. Another interesting cycling record was set under more challenging conditions on a unicycle. In the same year, on 12 September in Mobege (France), Raymond le Grand remained in motion for 11 hours and 22 minutes, covering a distance of 134.22 km during that time.

The Dutchman J. Zutemelk became one of the record-holders in the popular multi-day cycle race taking place on the roads of France. In 16 appearances, he managed to win once and finish second b times. The total distance covered by the rider amounts to 62,908.6 km.

One of the defining features of sport in our time is the growing popularity of the most gruelling competitions, which demand the utmost physical exertion and all-round training. In addition to the 'cycling festivals' mentioned earlier, and

similar events in other sports, which attract tens and hundreds of participants, new types of competitions
of ‘increased difficulty’ are being created, whilst marathon distances in athletics and swimming are being held under the most challenging conditions.

For example, the international ‘Mexico City Marathon’, which is a test not only of endurance but also of altitude (2,100 metres above sea level), the heat and the smog of the world’s largest city, attracted 23,000 runners to the starting line in 1986. This was almost twice as many as the West Berlin Marathon that same year, which attracted 12,280 participants from 56 countries.

The ‘walrus’ swim in the Vltava River became a tradition in the Czechoslovak Socialist Republic. In 1986, held for the 39th time, it attracted 165 participants, including 25 women, who enjoyed a favourable combination of water temperature (4
°C) and air temperature (3 °C).

In the 1970s, more and more people of all ages began to take up triathlon, and in October 1978, the first official international competition in this new sport took place in Hawaii, with just 15 ‘Ironmen’ taking part. The classic triathlon format consists of a 4 km swim, a 180 km cycle race and a full marathon run. All three stages of the combined event are held almost without a break, one immediately following the other. For novice triathletes, particularly women and children, competitions are held as a shortened version, i.e. with shorter distances for the swim, cycle and run. This relatively new sport is appealing because it promotes all-round and harmonious development, fosters invaluable psychological qualities and the ability to ‘push oneself beyond one’s limits’, and is excellent for building physical resilience.

For the 34-year-old Bulgarian athlete Vasko Stoyanov – a remarkable swimmer known for his world records in ultra-long-distance swimming – the triathlon distances seemed too short. And so he decided to tackle his own ‘marathon triathlon’ – a 15 km swim, a 250 km cycle and a 60 km run. In 1986, on an early summer morning, a large crowd of sports enthusiasts gathered in the stands of the 50-metre ‘Respublika’ swimming pool in Sofia watched as Stoyanov crossed the pool’s surface 300 times, clocking a time of 3 hours 38 minutes 31 seconds on his first, flagship event, a time of 3 hours 38 minutes 31 seconds. Then, jumping onto his bike, Vasko set about

racking up the kilometres at the capital's velodrome, located next door. Despite the 30-degree heat and the poor condition of the track surface, which was undergoing repairs (this, incidentally, forced Stoyanov to switch from a track bike to a road bike), the athlete completed the stage in 9 hours 18 minutes and 45 seconds. Ahead lay the toughest stage – the run at the 'Narodna Armiya' stadium. That night, having completed 150 laps of the 400-metre track, Vasko Stoyanov crossed the finish line with a time of 19 minutes 14 seconds. Ultimately, to cover 325
Vasco took 19 hours, 16 minutes and 30 seconds to cover the 'water and land' kilometres.

A few hours later, after a short rest, the new record-holder visited the offices of the newspaper *Rabotnichesko Delo*, where he spoke about his experiences. 'The most important thing about my achievement is promoting triathlon, which is a fantastic sport,' said Stoyanov. 'I won't hide the fact that it was tough, but once you've started, there's no turning back. I expected this result, as I'd trained hard for it. Not for a single moment did the thought of giving up cross my mind. I believed in myself! I've been swimming for a long time, and my successes in it are linked to marathon distances. Over the years, I've done a lot of running, as it forms part of my general physical training. Cycling, however, was a new discipline for me. Now I intend to compete in international events to prove that Bulgaria also has strong athletes in this new sport."

Vasco Stoyanov holds the world record for the 36-hour freestyle swim (107.3 km); in a stage-by-stage swim along the Danube, he covered 2,457 km in 355 hours. This swim from the Black Forest at the source of the Danube to its mouth on the Black Sea, which began on 23 April 1984, was described by many as 'madness' and few believed it would succeed; however, the athlete's determination and perseverance helped him achieve what seemed impossible.

The 27-year-old French athlete Jacques Martin ran across the Sahara Desert, covering a distance of 3,000 km. On average, Martin ran about 60 km a day. The most difficult part of the run, according to the daredevil, was convincing the drivers of passing cars that he did not need any help.

There is no form of transport that has not been used to test human endurance and resilience. In 1986, a group of Europeans – four men and one woman –

used hang gliders for this purpose, covering 6,000 km across Australia. They froze at high altitudes and suffered from the heat on the ground. They faced their greatest difficulties whilst flying across the central mountainous region of Australia, with the world's longest mountain ranges, Alice Springs and Ayers Rock. The athletes broke the altitude record for hang-gliding – 3,640 metres above ground level, or 4,440 metres above sea level. Their entire flight lasted 40 days.

Gymnasts and acrobats also demonstrate the unstoppable growth of human physical abilities. In 1888, the Russian circus artist Iosif Sosin became the first person in the world to perform a double somersault on the ground without the aid of circus apparatus. For many years, no one managed to replicate this record-breaking leap, and it was not until 1912 that Sosin's son, Alexander, succeeded. A further two decades passed before the double somersault found a new performer – the Soviet circus artist Dmitry Maslyukov. In 1949, Leonid Sveshnikov became the first competitive acrobat to perform a double somersault. By 1956, at the national championships, almost all the jumpers – around 100 of them! – were incorporating double somersaults into their freestyle routines. The USSR Acrobatics Federation was even forced to introduce a special restriction on this jump, which had become 'too easy'.

A similar situation arose with the outstanding Soviet athlete and Olympic champion Olga Korbut: the ultra-difficult 'ultra-C' gymnastic routines she performed were assessed by the world's leading experts as unique movements, executed at the very limits of human capability. On the basis of these findings, the International Gymnastics Federation banned Olga Korbut from performing 'ultra-C' routines in competition on the grounds that it was allegedly impossible for other gymnasts to master them. However, today many gymnasts perform routines involving even more complex coordination and risk, whilst spending considerably less time and exerting far less mental and physical strain in learning them.

Truly, there are no limits to human physical perfection!

Since our lives are governed by strictly regulated temperature conditions for biochemical reactions, it is clear that any deviation from the comfort temperature, in either direction, must have an equally adverse effect on the body. Human body temperature – 36.6°C (or, more precisely, 37°C at the so-called core of the body) – is much closer to the freezing point than to the boiling point of water. It would seem that for our body, which consists of 70 per cent water, cooling down would be far more dangerous than overheating. However, this is not the case, and cooling down – within certain limits, of course – is tolerated much more easily than heating up.

To compare the effects of heat and cold on the human body in comparable terms, let us take as a practical measure of change in body temperature – the temperature 'step' – one-sixth of the 'cold' and 'hot' parts of the temperature range bounded by the critical points of water's state: its transformation into ice and into vapour. Dividing the 36° (0°–36° C) of the 'cold' part of the range by this measure gives a value of 6° C for it and, accordingly, for
the 'hot' part of the range (37°–100° C) – 10.5° C.

The results of numerous observations indicate that a decrease in body temperature by one temperature 'step' (down to 30°C) does not pose a threat to human life, whereas an increase in temperature by a similar amount (up to 47.5°C) completely precludes the possibility of life. Even a 'half-step' of body overheating (up to 42.25°C) leads to a condition that is most often incompatible with life, whereas cooling the body by a similar amount (down to 33°C) is tolerated quite satisfactorily. An important conclusion follows from these purely indicative calculations: although, when cooled, the body would seem to be able to approach the critical threshold more easily, cooling the body is nevertheless less life-threatening than heating it. We might add that controlled cooling has a health-promoting effect – it helps to harden the body.

The differences noted in the effects of cold and heat on the body explain the results of many observations that seem implausible at first glance.

Healthy people can withstand a rise in body temperature of up to 42°C. According to doctors, based on

hundreds of thousands of observations, is no longer compatible with life. However, there are exceptions: cases have been reported of people recovering after their body temperature rose to 43.9°C.

The book *The Reserves of Our Organism* by N.A. Agadzhanian, Corresponding Member of the USSR Academy of Medical Sciences, and A.Yu. Katkov, Candidate of Medical Sciences, summarises numerous observations on the human body's ability to withstand high temperatures. A person can withstand a temperature of 71°C for one hour, 82°C for 49 minutes, 93°C for 33 minutes, and 104°C for only
26 minutes. American researchers believe that the maximum temperature at which a person is able to take at least a few breaths is approximately 116°C. However, at the Paris Academy of Sciences in 1764, Dr Tille reported that a woman had remained in a furnace at a temperature of 132°C for 12 minutes. In 1828, a case was reported of a man remaining in a furnace, where the temperature reached 170°C, for 14 minutes.

The length of time a person can remain in high-temperature conditions is limited by pain in exposed areas of the skin, as well as on the surfaces of the respiratory tract's mucous membranes that come into contact with hot air during breathing. US aviation medicine specialists have determined that when skin temperature rises to 42–44°C, a person experiences pain, and at 45°C the pain becomes unbearable. However, it is well known that an astonishing ritual preserved in southern Bulgaria – the art of fire-walking – enables dancers to walk barefoot on red-hot coals reaching temperatures of 500°C. This spectacle, performed before the eyes of the crowd and known as the 'miracle of fire-walking', enables the female dancers to avoid any burns.

Prolonged exposure to high air temperatures is particularly hard on the human body. For instance, due to the heatwave in Athens in the summer of 1987, where the temperature in the shade exceeded 40°–43°C for many days, more than 100 people died from heatstroke, and hospitals in the Greek capital were overwhelmed with patients in critical condition. It should be noted that humans adapt much less effectively to high air temperatures than to the cold.

This makes the experiment carried out by the Vacher couple in the Sahara all the more interesting: 41-year-old Gérard Vacher and his wife Silva undertook a 400-km cycling and running journey from

Tamandraset (Algeria) to Abidjan (Ivory Coast). Gérard covered this distance on foot, whilst Silva cycled it. Three-quarters of the couple's route passed through areas where the daytime temperature reached 60°C. The aim of the challenge, as the athletes stated, was to discover themselves and the limits of human capability.

Equally impressive was the ultra-marathon held in Death Valley – a Californian desert considered the driest and hottest (50°C in the shade and around 100°C in the sun) in the world.

The 98-year-old French runner Éric Lauro, who had long dreamt of such a challenge, set off 250 km west of Las Vegas and ran 225 km through Death Valley over five days. He covered around 50 km every day in 7–8 hours. Over the five days of running through the scorching desert, Lauro, who weighed 65 kg and was 1 m 76 cm tall, lost 6 kg. By the end of the run, his pulse had quickened so much that it was difficult to count, and his body temperature had reached 39.5°C. As we can see, even in extreme heat, a person can increase their resilience.

In 1987, the media reported on what seemed to be an incredible case of a man being revived after spending many hours in a state of suspended animation. Whilst returning home one evening, 23-year-old Reichert, a resident of the West German town of Radstadt, lost his way, fell into a snowdrift and froze. It was only after 19 hours that he was found by his brothers, who had been searching for him. 'Apparently, after falling into the snow, the victim became hypothermic so quickly,' explains Dr Werner Aufmesser, 'that, despite the acute lack of oxygen, his brain did not suffer irreversible damage. I transported him to the Salzburg Clinic for Intensive Cardiac Surgery in an ambulance with the heating switched off." At the clinic, Dr Felix Unger began the resuscitation process. Using a special device, he slowly warmed the frozen man's blood over the course of several hours. A machine was also used to thin the blood. And only when his body temperature had risen to 27°C did the doctor, using an electric shock,
'restarted' the victim's heart. A few days later, he was taken off the heart-lung machine. Helmut Reichert is now feeling well.

The case of H. Reichert is by no means an isolated one. Professor N.A. Agadzhanian and A.Yu. Katkov, PhD in Medical Sciences, report on

several cases of the resuscitation of people suffering from hypothermia, as described in the literature.

In February 1951, a 23-year-old Black woman was admitted to a hospital in Chicago (USA) after lying in the snow for 11 hours at air temperatures ranging from –18° to –26° C. Her skin temperature was below zero, whilst that of her internal organs was 18°C – i.e. much lower than the level to which surgeons cool them during the most complex operations. Upon examining the woman, the doctors were astonished to find that, despite such severe hypothermia, she was still breathing, albeit very slowly (3–5 breaths per minute) and shallowly. Her heart was still beating – although her pulse was slow (12–20 beats per minute) and irregular. Rewarming, combined with resuscitation measures, made it possible to bring the frozen woman round…

Here is another striking case recorded in our country. On a March morning in 1960, a man suffering from hypothermia was brought to a hospital in the Aktobe Region; he had been found by chance by workers at a building site on the outskirts of the village. Here is an extract from the report: “A stiffened body in icy clothing, without a hat or shoes. The limbs are bent at the joints and cannot be straightened. Tapping the body produces a dull sound, as if striking wood. The body’s surface temperature is below 0°C. The eyes are wide open, the eyelids covered with a rim of ice, the pupils dilated and cloudy; there is a crust of ice on the sclera and iris. No signs of life – heartbeat or breathing – can be detected. Diagnosis: general hypothermia, clinical death.

Naturally, on the basis of a thorough medical examination, Dr P.S. Abramyan, who had examined the frozen victim, should have sent the body to the mortuary. However, contrary to the obvious facts, unwilling to accept the death, he placed the victim in a hot bath. Once the body had been freed from its icy covering, attempts were made to revive the victim using a range of resuscitation measures. An hour and a half later, a faint pulse appeared alongside weak breathing. By the evening of the same day, the man had regained consciousness. Upon questioning him, it was established that V.M. Kharin, born in 1931, had been lying in the snow in the freezing cold for 3–4 hours. V. Kharin not only survived but also retained his ability to work. The consequences of his exposure to the cold included bilateral inflammation

of the lungs and pleurisy, as well as the amputation of his frostbitten fingers. For several years, he suffered from functional disorders of the nervous system, which gradually subsided.

The French journal *Science et Vie* reported a similar case. On 21 December 1980, the American Jane Hillar was pulled from the snow, where she had been lying for many hours in severe frost (-30°C). On examination, however, her frozen body was found to have weak and infrequent heartbeats at a rate of 12 beats per minute. After being warmed up and given medication to support her weakened circulatory and respiratory functions, Jane came round. Her brain and consciousness were unharmed; only patches of skin on her limbs had become necrotic.

We have described unique cases of human survival in extreme, usually fatal, situations of hypothermia. However, far greater harm is caused by cases of mild hypothermia.

Many hundreds, and often thousands, of people (particularly children and the elderly) die during flu epidemics if this is compounded by hypothermia of the body.Furthermore, greater losses are suffered by society as a result of so-called colds. This demonstrates that the fact that the the majority people lack even a basic resistance to temperature fluctuations. Therefore, in addition to physical exercise, it is also necessary to harden oneself. However, many people have become so unaccustomed to exposure to the cold that they see it as a threat to their health.

It is not cooling down that is dangerous – that is actually beneficial – but hypothermia, to which unhardened people are more prone. That is why to strengthen your health a person should make use of natural factors – the sun, air and water.

It is important to bear in mind that, by ‘working against equilibrium’ and overcoming external conditions, the body, to use the figurative expression of the Austrian physicist E. Schrödinger, is, as it were, nourished by negative entropy (negentropy), extracting it from the environment and thereby increasing its functional capabilities. Exposure to cold acts as a biologically very important negentropic factor. The difference in temperature between the environment and the body’s core unleashes a powerful stream of stimulating influences upon the skin’s sensory receptors, which, much like in a thermocouple, charge the body with energy and stimulate its vital functions.

It is now well established that hardening is an essential component of a healthy lifestyle, and a key factor in maintaining physical fitness and active longevity.

It is not at all difficult to follow the hardening recommendations developed by specialists. And for those who, out of excessive caution and unfounded fears, avoid any hardening procedures, the experience of a number of medical institutions utilising the healing properties of ice-cold water to combat health problems may prove instructive. For example, at the S.M. Kirov Sanatorium in Yalta, winter sea bathing is used to treat hypertension and neurasthenia; at Kaluga City Hospital No. 1, cold therapy is used to treat neuroses and bronchial asthma.

Of particular interest from a health perspective is the hardening system developed by P.K. Ivanov, a resident of the Voroshilovgrad region, which Porfiry Korneevich tested on himself for fifty years. All year round, whatever the weather, he would walk about in just shorts and bare feet, bathe in an ice hole, and could go without food or water for long periods whilst remaining energetic, optimistic and able to work. Hundreds of his followers run barefoot through the snow, douse themselves with cold water every morning and evening, and seize every opportunity to spend as much time as possible outdoors with their bodies exposed, both in summer and winter.

Guided by the advice ‘let the body breathe and learn to draw warmth from the cold’, followers of this hardening method have learnt not to feel the cold even in the most severe frost.

Although not all the physiological mechanisms behind this hardening method are fully understood today, its health benefits are undeniable. Here, for example, is what I. Khvoshchevsky, a specialist in thermodynamics, one of P.K. Ivanov’s followers and a Candidate of Technical Sciences, has to say: “As a result of his unparalleled experience, P.K. Ivanov succeeded in demonstrating that, in cold conditions, processes associated with the constant generation of internal energy begin to manifest themselves in the human body. It cannot be ruled out that this resonates with K.E. Tsiolkovsky’s ingenious hypothesis—which, whilst possible, has not yet been convincingly substantiated—regarding the slow and cost-free extraction of energy from surrounding cold bodies…

Perhaps, under unusual, extreme conditions, qualities unknown to us are revealed within the body; for now, we can only speculate about them."

However, to improve one's health, it is by no means necessary to resort to 'extravagant' methods of hardening – such as bathing in an ice hole in winter, walking naked in severe frost, running barefoot through the snow, and so on. It is sufficient to take regular fresh-air baths, use water treatments, spend more time outdoors, ventilate your work and living spaces more often, and not be afraid of gentle draughts. The only important thing is to adhere to the basic principles of hardening – gradualness, regularity, consistency and comprehensiveness. Only by fulfilling these conditions can the desired result be achieved.

One can go without food for a long time – weeks or months – and one can go without drinking water for several days, but life without breathing comes to an end in a matter of seconds. Indeed, the entire life of each of us is measured by the period between our first and last breaths. However…

It turns out that, under the influence of systematic physical training, a person acquires the ability to withstand a lack of oxygen, or hypoxia. Resistance to hypoxia has become a key component of record-breaking achievements in modern sport. When performing at the limits of physical exertion, the respiratory and circulatory systems are unable to supply the working muscles with sufficient oxygen. Under these conditions, the athlete who prevails is the one who, through sheer willpower, can continue muscular effort, achieving what might seem impossible. This is precisely why highly trained athletes develop the ability to hold their breath for much longer than untrained individuals. The duration of such breath-holding in athletes can reach 4–5 minutes.

If, however, special techniques are used to increase the body's 'reserve' of oxygen or reduce its consumption during the subsequent breath-holding period, the time for which one can manage without lung ventilation increases to 12–
15 minutes. To build up a reserve of oxygen, athletes breathe a gas mixture enriched with oxygen (or pure O_2), whilst

the reduction in oxygen consumption is achieved through mental preparation and self-suggestion, which help to lower the body's metabolic rate.

The results achieved seem incredible. For example, the world record for the duration of a dive was set in 1960 in California by Robert Foster, who remained underwater for 13 minutes and 42.5 seconds. Before diving, he breathed oxygen for 30 minutes, trying to take in as much as possible to build up a reserve.

Also of interest are the observations of the American physiologist E. Schneider, who in 1930 recorded even longer breath-holding periods in two pilots – 14 minutes 2 seconds and 15 minutes 13 seconds.

Here is another incident reported in the newspapers in 1987. Two young children survived after spending fifteen minutes in a car that had ended up at the bottom of a Norwegian fjord. The accident occurred when the car, driven by the mother, skidded on an icy road and plunged down into Tandsfjord, on the west coast of Norway. The woman managed to jump out of the car, whilst her four-month-old daughter and two-year-old son were trapped inside the vehicle at a depth of ten metres. The first passing car, which the mother flagged down, belonged to a local council employee, and using a mobile phone, they managed to alert the fire brigade immediately. And then events took an incredibly fortunate turn. The duty officer who received the emergency call knew that the diving club had its base right near the scene of the tragedy. The children were in luck, as at that very moment there were three divers at the club, fully kitted out for rescue operations. They immediately set about rescuing the children. After spending fifteen minutes underwater, the children suffered cardiac arrest. However, they were successfully rescued.

It is generally accepted that the healthiest eating pattern for a person is to have three or four meals a day at strictly fixed times. However, this is not entirely true. Of course, eating haphazardly at any time of day without any rules is harmful to health. Nevertheless, one should not train oneself to follow a strictly fixed eating schedule, as this makes the body heavily dependent on food. One should not be afraid to go without food for a short while. Moreover,

such ‘breaks’ from eating can, in some cases, prove beneficial to health. Without going into detail on a number of issues concerning therapeutic fasting (those interested may consult the works of Professor Y.S. Nikolaev and, in particular, his book *Fasting for Health*), we shall present some data on how long a person can go without food.

First and foremost, it is important to bear in mind that when the intake of food ceases, the body’s nutrition does not simply ‘shut down’. It continues, and – this is important to remember! – for a long time it is sustained by the most complete nutrients! Such nutrition is, firstly, 100 per cent individualised – since it is derived from substances synthesised by the body itself – and, secondly, brings direct benefits to most people, as it reduces excessively large stores of nutrients, primarily fat.

It is worth recalling that the ability to store nutrients in the body ‘for future use’, which has evolved in many animals, is a valuable adaptation – we emphasise, specifically for them. A bear entering a long period of hibernation, or a camel living in the desert, where it may go weeks without encountering any edible plants, cannot survive without the food reserves stored in their bodies for future use. Aquatic mammals are equally dependent on food reserves converted into the most energy-dense form – fat (1 g of fat contains 9.3 kcal of energy, whereas 1 g of protein and carbohydrates contains only 4.1 kcal). In these animals, as in a number of land-dwelling animals and birds, fat plays a dual role: it serves as a reserve of nutrients stored ‘for later’ and, furthermore, when deposited in the subcutaneous tissue, acts as a reliable insulator that protects the body from cooling down.

But humans have no need for any of this. After all, each of us has other ways of storing both food and our body heat. As Professor G.I. Kositsky, a corresponding member of the Academy of Medical Sciences of the USSR, rightly observed, there is no need for humans to turn themselves into a fridge for their own food.

We might add that there is also no need to turn part of one's own body into an insulator that restricts heat exchange with the external environment. Fridges and clothing cope perfectly well with these tasks, without placing a burden on our bodies and allowing people to use their bodies' physical capabilities to achieve lofty, truly human goals.

Unfortunately, however, many people are convinced that if they do not have breakfast or lunch on time, something irreparable will happen to their bodies. Meanwhile, it is well known that a healthy person, even without an excessive amount of fat in their subcutaneous tissue, can go without food for up to 30 days without harming their body. The examples given below point to the great potential for humans to survive independently without food.

In 1986, a Japanese man Y. Suzuki undertook a climb Mount Fuji (3,776 m). At an altitude of 1,900 metres, the 49-year-old mountaineer was caught in a severe snowstorm, but managed to take shelter in a hut. There he had to spend 38 days. Suzuki survived mainly… snow. Those who discovered him rescue rescue service found Suzuki in satisfactory physical condition. In Jack London's short story 'The White Silence', there are these lines: 'Nature has many ways of convincing man of his mortality… But the strongest, the most crushing of all is the White Silence in its impassivity.' And in many other works by this outstanding writer, the most gruelling trials are described, befalling everyone who dares to take on the forces of nature in the North. Even the strongest and most courageous are stunned and overwhelmed by an environment in which, as Jack London wrote, nothing stirs, the sky is clear as polished copper, the slightest whisper seems sacrilegious, and a person, cowed, is frightened by the sound of their own voice. The sole living being moving through the ghostly desert of the dead world, he is terrified of his own audacity, realising that his life is no more than that of a worm.

Whilst paying tribute to the talent of this remarkable writer, we must nevertheless acknowledge that the dangers described by Jack London in 1900 constitute only a small fraction of the perils facing the Arctic traveller. Alas, the region of the North Pole is not a lifeless and motionless expanse of icy desert.

Absolute silence – the ‘White Silence’ – does indeed descend upon the Arctic. However, more often than not, the traveller can only dream of it. Whilst on drifting ice, one frequently hears the rumbling of colliding ice fields, the piling up of ice ridges, the howling of the wind and the cracking of the shifting ground.

Nevertheless, those who have experienced the absolute Arctic silence – realising their isolation from the familiar trappings of civilisation, which lie far away, and the dependence of their very lives on the whims of the elements – are left with profoundly unsettling impressions. The ‘White Silence’ can lead to serious mental disturbances, depression and hallucinations. The unique atmosphere of the deathly white icy deserts is one of the reasons why travellers prefer to move in groups, creating the conditions for communal living and, most importantly, the company of like-minded people who are always ready to come to their aid.

…French explorer Jean-Louis Étienne’s battle with the Arctic lasted two months. The intrepid 38-year-old Parisian traversed a thousand kilometres of icy desert and ice ridges before reaching the North Pole, adding a new chapter to the annals of its conquest. A renowned specialist in sports medicine and physiology, Étienne took part in an expedition to the ‘third pole’ – Everest – crossed the ocean alongside the famous yachtsman Éric Tabarly, and competed in the Paris–Dakar rally. And although Étienne was a well-rounded athlete, trained to cope with the cold (he could easily withstand temperatures as low as minus 50 degrees), those around him did not believe his plan would succeed. “Before the start, most people were of the view that I was embarking on a reckless adventure,” Jean-Louis told a correspondent for the newspaper *L’Humanité-Dimanche*. “When I was seen off from the Canadian town of Resolute Bay, they assured me that my chances of success were just two per cent. And they even said goodbye with a touch of irony: ‘See you tomorrow.’

Recounting the hardships he endured in complete solitude, the intrepid athlete recalls: ‘At times I felt as though I were wandering on another planet. No smells, not a single sound. A deathly, otherworldly silence. I much preferred tackling the piles of ice hummocks to walking across the monotonous plain. Of course, climbing mountains is harder, but after conquering each peak I felt a

incomparable sense of joy at this small victory." Despite the difficulties, Étienne pressed on towards the Pole. And finally, on 11 May 1986 at 2.04 am, he reached the point from which all directions lead south. However, the joy of victory gave way to anxiety – the aeroplane that was due to pick up the explorer from the Pole had not arrived. Waiting for the aeroplane during the final days of the expedition caused the explorer the greatest distress. Étienne was running out not only of food supplies but also of strength. It was only four days later that the aeroplane arrived…

Jean-Louis Étienne had predecessors. In his book *On Foot Across the Arctic Ocean*, the English polar explorer W. Herbert recounts the trans-Arctic crossing undertaken by a group of four men and three dog sled teams from Cape Barrow in Alaska to Spitsbergen. They were the first to successfully cross the Arctic Ocean over the ice. This expedition (1968–1969) rightly ranks among the outstanding expeditions of our time, demonstrating the remarkable capacity of human beings to adapt to the harshest conditions of the North.

However, the most striking example of remarkable composure and courage is the expedition of the Japanese traveller Naomi Uemura, who reached the North Pole on 29 April 1978 whilst travelling alone. Uemura's life story is instructive: he managed first and foremost to overcome his own weaknesses, and then to achieve brilliant victories in the 'outside' world. One of the weakest students at the University of Tokyo, Naoki joined the mountaineering club but was unable to climb Mount Fuji, a route well-trodden by hundreds of thousands of tourists. Looking back on this period of his life, Uemura says: 'It was humiliating; I constantly felt a sense of immense shame.' Ashamed of his weakness, the student forced himself to train with particular determination. He became deeply passionate about mountaineering.

Within just five years, the awkward, frail young man had become a resilient and strong mountaineer who had conquered the most challenging peaks on the globe. In July 1966, he climbed alone to the highest peak in Western Europe – Mont Blanc (4,807 m) – and the formidable Matterhorn (4,477 m). In October of the same year, Uemura also made a solo ascent of Africa's highest peak – Mount Kilimanjaro (5,895 m) – and Mount Kenya (5,199 m). A year later,

, Uemura once again climbed alone to the summit of South America's highest mountain – Aconcagua (6,960 m) – and two other unnamed peaks in the Andes. This series of brilliant achievements was capped by a solo descent down the Amazon on a raft – a journey of 6,000 km
!

Uemura found himself completely unprepared for his water journey. 'It was a real adventure. Looking back on that time, I think it was the most dangerous journey I have ever undertaken,' Uemura later remarked. 'And I, of course, will never dare to do anything like that again.' It must be acknowledged that, despite his passion for travel, he possessed the fortitude and composure to keep his word. Unlike many, he was able to learn lessons not only from his failures but also from his own successes; Naomi Uemura subsequently astonished everyone with the sober calculation on which his actions were based. Two years later – on 11 May 1970 – as part of a Japanese Himalayan expedition, he conquered the highest peak on Earth – Everest (8,848 m) – and shortly afterwards, in a solo ascent, reached the summit of the North American continent's highest mountain, Mount McKinley (6,193 m). Thus, at the age of 29, Uemura had conquered the highest peaks of Europe, Africa, South and North America, and Asia.

In 1971, he concluded the 'mountain phase' of his life with challenging ascents in the Alps and the Himalayas and began preparing for a polar expedition. He began his training programme for travelling across the ice with a trek across Japan at a very intense pace: he covered 3,000 km in 52 days! The following year, after visiting Antarctica, he settled in Greenland for ten months, where he acclimatised to the harsh conditions of the North, learnt to drive a dog sledge and travelled some 3,000 km along the island's north-western coast. The final stage of Naomi Uemura's preparations for his northern odyssey was a solo journey of 12,000 km across Greenland, northern Canada and Alaska.

The first-ever solo expedition to the North Pole set off in March 1978, and 55 days later, on 29 April, Uemura reached his destination. Describing his journey afterwards, he admitted: "To be honest, many times during the journey I felt I wouldn't make it. What kept me going was the thought of

the people who had helped and supported me, and the realisation that I would never be able to look them in the eye if I gave up… I also thought of my wife Kimiko, who was in Japan, and remembered her with longing and regret…

Perhaps she, and all those people whose thoughts and prayers accompanied me on my journey, will be proud of the results of my expedition, which would undoubtedly not have ended so happily had it not been for them. If that is the case, then I am happy!"

It is telling that, having reached the Pole, Naomi Uemura did not rest on his laurels. After returning by plane to Alert Base, the explorer set off on a new expedition just a few days later – on 11 May. Travelling by dog sledge, she became the first person in the world to cross the Greenland ice sheet, covering a distance of 2,600 km from north to south! In the years that followed, Uemura visited Tibet and the Himalayas, preparing to climb Everest solo in the future. Then news emerged that he was in Antarctica, at an Argentine polar station, from where he intended to begin his ascent of the continent's highest peak – Vinson Massif (5,140 m). The ascent, however, was thwarted by the Falklands Crisis. The final expedition of this remarkable traveller and sportsman was the ascent of Mount McKinley. Naomi undertook this second ascent in the most extreme conditions during winter, when even at the foot of the mountain the temperature drops to –50 °C. And this ascent ended in a triumph of the great traveller's willpower and endurance – on 12 February 1984, his birthday, Naomi was spotted on the summit. However, following a severe snowstorm that struck Mount McKinley during those days, he was never seen again…

In the memories not only of those who knew Naomi Uemura, but also of everyone who has ever heard or read about this legendary man, he remains a symbol of the utmost courage and sincerity…

'How many times have I felt fear… and yet, every time, it returned. I still don't know how to get rid of it,' he once admitted. Perhaps that is true, but thanks to people like Naomi Uemura and Fridtjof Nansen, we know how to act in the most difficult circumstances of life – to muster all our strength, courage and composure and fight to the very end, so that our loved ones need not be ashamed of us, and so that we ourselves can look them in the eye.

‘Victims of legendary shipwrecks, I know this: it was not the sea that killed you, it was not hunger that killed you, it was not thirst that killed you! Rocked by the waves amidst the mournful cries of seagulls, you died of fear’ – this was the conclusion reached by the intrepid navigator Alain Bombard. He believes that the human body’s reserves enable it to survive even in the most extreme situations at sea; one need only fight to the very end for one’s survival. And anyone who emerges victorious from a battle with the elements of the sea deserves boundless respect, and not just for their courage. The experiences of such people serve humanity, helping others to survive in similar situations.

According to the Guinness Book of Records, the longest time a person has spent on a raft is 133 days (4.5 months). Pun Lim, a sailor in the British merchant navy, survived for that long on the open sea after his ship, the ‘Ben Lemond’, was torpedoed by the Germans on 23 November 1942 in the Atlantic Ocean near the Azores. On 5 April 1943, he was discovered by several Brazilian fishermen and brought ashore.

Meanwhile, 37-year-old Dane Uwe Jonsen managed to set an extraordinary rowing record. In 27 days, he rowed across the Atlantic Ocean, covering 900 nautical miles (1,667 km). After a minor accident near the Shetland Islands, he arrived safe and sound at the Danish port of Tyboren.

An even longer journey was reported by the media in 1986. Ove Jensen, a resident of the Faroe Islands, rowed a six-metre boat from his home village to Copenhagen in 42 days, a distance of around 2,000 km. Twice, in 1984 and 1985, his attempts to row across three seas ended in failure due to strong headwinds, and he was forced to return home. When reporters, congratulating him on his success, asked the sailor whether he intended to repeat his journey, he replied in the negative, saying that he did not want to put his parents’ nerves through another ordeal.

In 1986, a traveller who had been presumed lost at sea was ‘found’: 49-year-old Englishman Donald Olum set off on a transatlantic voyage in a homemade boat. However, on the 113th day after setting sail from the Canary Islands, he… disappeared. After all the expected waiting periods had passed, he unexpectedly rang from

the West Indian island of Nevis. The traveller reported that for the past two weeks he had eaten nothing but raw fish and drunk nothing but seawater. And although he had lost 45 kg – exactly half his body weight – he felt perfectly healthy.

Two ‘Robinson Crusoe’ figures of the seas – the Frenchman Alain Bombard and the Scotsman Chay Blythe – have written glorious chapters in the history of solo sailing. Both travellers are united by a great obsession, a passionate desire to benefit humanity by demonstrating the real possibilities of survival in the struggle against the ocean. A. Bombard’s transatlantic crossing was undertaken in 1952 and lasted 65 days in a small rubber dinghy called the ‘Heretic’.

The intrepid traveller succeeded in proving something that people before him had not known: shipwrecked sailors, it turns out, are by no means doomed to perish in the waves! Salt water was considered unfit for drinking. However, it turned out that it could be consumed in small quantities – though no more than 1 litre a day and for no longer than 7–8 consecutive days. As a doctor, Bombard was well aware of the dangers associated with ingesting large amounts of salt, which can damage kidney function. However, having tested his recommendations on himself and weighed up the pros and cons of drinking seawater, Alain Bombard concluded that if a person does not drink any water at all, their consciousness and ability to function are usually impaired as early as the second or third day – that is, well before the kidneys fail. And for 7–8 days, whilst the kidneys are still able to ‘desalinate’ water, a person’s life can be saved. After all, help might arrive during that time… A. Bombard’s book *Overboard of My Own Accord*, translated into Russian and many other languages, is a story about how to survive in the most difficult conditions.

Equally instructive is another book, written by Chay Blythe, *The Unthinkable Voyage*, which has also been translated into Russian. Between 1970 and 1971, the author completed a round-the-world voyage in ten months on a small sailing yacht through the world’s roughest waters. Defying the elements, the intrepid Scot sailed westwards against the winds and currents, without calling at any ports or receiving any assistance from outsiders.

In his book *Solo Across the Ocean*, the Polish engineer, yachtsman and writer Andrzej Urbanczyk recounts the history of solo

voyages over a 100-year period, recounting the courage and fortitude of those who resolved to battle the ocean's forces and proved capable of overcoming the burden of solitude – perhaps the most severe of the trials in this gruelling solo struggle.

Other heroic travellers include D. Spokam, W. Willis, F. Chichester and many others. They are joined by the Bulgarian sailors – the married couple D. and Y. Papazov – who, in 1974, crossed the Atlantic Ocean (from Gibraltar to Cuba) in a lifeboat, acting as 'voluntary shipwreck victims'. Their main food source was plankton caught at sea. These intrepid adventurers described their observations, which formed part of the programme to explore the world's oceans, in the book *Under Sail Across the Ocean*, which has been translated into Russian.

The ocean's trials of mankind continue…

'I want to challenge the limits of human endurance,' said the remarkable Japanese traveller and athlete Naomi Uemura. These words reflect an aspiration shared by many people. It has been particularly evident in the most gruelling endurance sporting challenges across various forms of marathon swimming.

The first world record for the distance swum in a day was set on 23 June 1912 by Leonid Alekseyevich Romanchenko, a French teacher from Baku. In 24 hours and 10 minutes, he swam 48 versts across the Caspian Sea. Since then, both the maximum distance covered by a swimmer and the duration of a swim have increased dramatically. The Argentine Antonio Albertino, swimming across the English Channel in both directions without stopping and battling a strong current that carried him far from the shortest route, covered a distance of over 100 km and spent 43 hours and 4 minutes in the water. Another outstanding ultra-marathon achievement in swimming belongs to the 40-year-old Yugoslav J. Tanko, who covered the distance from Venice to Portorož (105.6 km) in 40 hours and 20 minutes.

On 29 July 1940, the American John Zickmund completed a record-breaking swim down the Mississippi River from St Louis to Caruthersville (470 km), taking 89 hours and 48 minutes. An even longer swim, covering 1,770 km, was undertaken in 1984 by two Frenchmen – 54-year-old Bernard Bourguain and 38-year-old Patrick Benoît. The ultra-marathon swimmers wore wetsuits, as swimming in

a polluted river was dangerous. The athletes slept on inflatable mattresses right on the water and only swam ashore to have a snack.

In 1981, news emerged of a new ‘round’ of competition between two athletes – the French yachtsman Stéphane Peyron and the Dutchman Ronald Liesting – who were aiming to set a world record in a non-stop windsurfing race. In 1980, having covered 502 km in 60 hours, Liesting took the top spot from Peyron.

For eight months, Stéphane Peyron prepared for a new record: he trained himself to go without sleep for five days at a time and built up his endurance and coordination through prolonged physical exertion. His efforts were crowned with success: he managed to cover 506 km 266 m on his board in just under three days – 70 hours 30 minutes. On the shore, the intrepid athlete was met by his girlfriend, 17-year-old Caroline Staline, with whom he had been training in preparation for the record. (The reunion was all the more joyful as, during the same period, Staline herself had been awarded the title of women’s world record holder – she managed to sail 204 km 478 m on a board in 30 hours 15 minutes), “I still have plenty of energy left. I’m still a long way from my limit,” the record-holder told journalists.

However, in 1984, Stéphane Peyron’s achievement was surpassed by another Frenchman – Marco Topdemir, who lasted more than three days at sea – 74 hours, 8 minutes and 14 seconds. During the journey, the athlete subsisted solely on bananas.

Well, we’ll just have to wait for new records…

There are feats which, being literally a ‘journey into the unknown’, contribute a great deal to scientific research. These include, first and foremost, deep-sea dives undertaken without specialised equipment. How deep can a person descend without breathing apparatus? Physiologists consider 20 metres to be the safe limit. Below this depth, the right chambers of the diver’s heart become overloaded with blood, pulmonary oedema sets in and loss of consciousness occurs. Only a highly trained body is capable of withstanding a dive to such great depths. For instance, it is known that the famous Japanese female divers – the ‘ama’ – descend to depths of 20–25 metres whilst hunting in underwater gardens. On the islands

the Pacific Ocean, pearl divers descend even deeper – to 45 metres – whilst Greek sponge divers reach depths of up to 60 metres.

However, specialised psychophysical training makes it possible to overcome even these limits. The deepest free-dives without breathing apparatus were achieved by the French athlete Jacques Mayol. On 4 November 1981, after many years of preparation, including physical training and sessions in mental regulation based on the yogic system in Pondicherry (India), he set a record in a passive dive, reaching a depth of 76 metres (he completed the descent and ascent in 2 minutes 30 seconds on a single breath). Continuing his training, he subsequently improved his diving record by a further 25 metres. He reached a depth of 101 metres under conditions that minimised oxygen consumption as much as possible: with his body's muscles relaxed and in a state of mental concentration that prevented both movement and emotional tension. Mayol's dive lasted 3 minutes 10 seconds, and his total breath-hold lasted 4 minutes 57 seconds.

In 1984, the world was treated to another sensation – at the age of 56, Jacques Mayol set a new phenomenal record by reaching a depth of 105 metres! This record is the athlete's ninth world record. Interestingly, in 1980, in an interview with Jacques Dumas, President of the World Conference on Underwater Activities, published in the French magazine *Études et Sports Sous-marins*, the famous diver claimed that a depth of 100 metres was the limit of human capability.

Shortly afterwards, a new world diving record set in 1986 by the 32-year-old Italian diver Stefani Makula came to light. In the Blue Grotto off the coast of Capri, he descended to a depth of 65 metres, improving on his previous record set three years earlier by two metres. It is important to bear in mind, as the UPI news agency notes, that Macula set a 'clean record' in diving, as he used only standard fins. This sets him apart from other divers, in particular Enzo Maiorka, who reached a depth of
90 metres 40 centimetres using ballast in the form of special steel
'sleds' sliding along a vertically tensioned steel cable. Makula achieved his record-breaking result on his third attempt, and the entire period

preparation for setting the new record, including two unsuccessful attempts, took two and a half months.

There are no places so inaccessible that they do not become the object of daring adventurers' aspirations. For instance, 38-year-old Henri Payro, a resident of Chamonix (France), found his passion in conquering icy mountain rivers. In 1982, he swam down from Everest in Nepal; in 1985, he swam down the upper reaches of the Ganges in India. After that, he covered 300 km along the Colorado River in the United States, managing to survive the passage through
28 rapids and waterfalls, where the river crashes against the rocks at incredible speed and the waves reach heights of 5–6 metres. 'Feeling like a conqueror of such a force of nature,' said A. Payro after crossing the finish line, 'is an unforgettable pleasure. What was I trying to prove with my swim? Just one thing: I wanted to show people that there are no hopeless situations; you just need to summon your strength of spirit and face dangers head-on, whether it's an accidental fall into a mountain river or a mudslide."

LEARNING FOREIGN LANGUAGES

At present, people all over the world speak nearly 3,000 languages. The most widely spoken include: Chinese, English, Hindi, Russian, Japanese, Spanish, German, French, Belgian, Malay, Portuguese, Italian and Arabic.

Interestingly, of the total number of languages, 1,200 are Native American languages, spoken by a total population of just over 17 million people. In terms of geographical distribution, Spanish ranks first. As the experience of polyglots shows, one should start by learning the major languages and then move on to related ones. The more languages a person knows, the easier it is for them to master each new one.

'The main thing is not to be shy!' say polyglots. 'When learning a language, try at all costs to express your thoughts in the language you want to master. Be as curious as possible. Try to interact as much as you can with those who know the language and can help you. Listen to more music and train your ear. A good ear is a great asset when learning a foreign language."

1. Main methods of learning a foreign language

1) The direct method. The teacher repeats a word whilst pointing to the object it refers to, until the student has learnt it. Using this method, it is possible to master a foreign language in 200 hours.

2) The language lab method (using gramophone records and tape recordings). Lessons are best held in a language lab equipped with audio and projection equipment. Before starting independent work with records or tape recordings, you should carefully read the instructions provided with them. From then on, it is simply a matter of perseverance and diligence.

3) The accelerated method. Learners are not required to study grammar or language structure. There is just one objective: to teach and encourage them to speak. Only a third of lessons is devoted to theory, whilst the rest of the time focuses primarily on spoken language.

Linguists have identified the following pattern: the most frequently occurring words ‘cover’, that is, account for 20 per cent of spoken and written language, whilst 1,500–2,000 words account for as much as 85 per cent. Knowledge of approximately 5,000 words and idiomatic expressions will enable you to read fluently in a foreign language.

Whichever method you choose for learning a foreign language, it is advisable to read as much as possible. Adventure fiction is particularly suitable for this purpose. At first, your reading will be very slow, but you must not give up and should do your utmost to speed it up, sacrificing accuracy and complete understanding by simply skipping over anything you do not understand. Gradually, you should consult the dictionary less and less frequently and do your utmost to develop your ability to infer meaning from the context. The aim of this kind of reading is to build up an optimal store of foreign-language words and phrases in your memory. Success will depend on the quantity of what you read and the quality of your reading practice.

2. General rules and techniques for learning a foreign language

1) Study regularly. It is better to study a little bit every day than for many hours once a week.

2) Always have with you compact written current materials: vocabulary, rules, texts.

3) Vary the format of lessons: reading, listening, grammar, writing, etc.

4) Learn words directly in context, rather than from a list.

5) Read as much as possible, even if you struggle to understand the text.

6) Memorise as many words, phrases and texts as possible.

7) Master a range of words and expressions such as ‘it should be said’, ‘I would like to point out’, ‘in my opinion’, ‘it makes sense’, ‘give me a minute to think’ – you’ll need all of these to buy yourself time to think of your next sentence when necessary.

8) Language is a fortress, and you need to storm it from all sides and by any means necessary. The key to success is any kind of practice, so make the most of every opportunity to speak, read and write in the language you're learning.

9) Don't be afraid of making mistakes: after all, that's how you learn. Being overly shy won't help here, but a bit of self-confidence won't go amiss.

10) Make use of time that would otherwise be wasted – journeys on public transport, waiting for a doctor's appointment, and so on.

In recent years, the method of learning a foreign language whilst in the SK-1 state has gained significant popularity: in this state, a person can learn a foreign language in 1.5–2 months, and in the SK-2 state, in 30–40 minutes! And those who have mastered SK-4 and SK-5 understand any language instantly, even the language of animals.

IDEOMOTOR PHENOMENA

In ancient times, Russian priests observed that the human psyche functions more effectively in specific, altered states of consciousness, which manifest themselves primarily through the automatic nature of actions performed, a sense of weightlessness, tirelessness and the rationality of movements. And since the Rus' were a military caste and a priestly class in most countries of the Ancient World, the secrets discovered by the priests, just as in the present day, first and foremost found their way to the military.

The training of a professional warrior lasted many years, and its aim was the daily practice of all the basic military techniques of attack and defence to such an extent that practical skill became automatic—that is, performed instantly, appropriately and unconsciously. Examples of this art have survived to the present day, when a Cossack could, in the blink of an eye, fell a tree with his sabre whilst at full gallop, and the tree would remain standing without so much as a twitch; indeed, the swing of the sabre was so lightning-fast that the observer's eye simply could not follow it. Neither before nor after did the Cossack feel his own body or his horse; his consciousness was inspired and extraordinarily clear.

Thus, the ancient Russian priests decided to utilise trance states to accelerate military training and enhance the combat skills of Russian warriors. And, indeed, the use of trance drastically reduced the duration of combat training and dramatically improved the military prowess of the Russian warriors – they could fight, defend themselves and pursue the enemy for several days on end, never tiring and always emerging victorious, even when vastly outnumbered and with virtually no losses, for no one could defeat a Russian warrior. This state –
the 'Russian spirit' – was instilled in all warriors right up until the Christianisation under the Great Khan Vladimir in 988.

Over time, the 'trance-like movement' spread to all other aspects of life – ritual dances, painting, poetry, literature, sculpture, theatre, sport, biolocation, and so on.

The discovery made by the Russian priests quickly spread throughout the Ancient world and eventually developed into the martial

art and culture of most of the world's peoples.

The psychotechnique for entering a trance consisted of achieving weightlessness through the 'floating of the hands', followed by a transition to the desired activity – writing, drawing, eating, fighting, sex, public speaking, etc.

The greatest contribution to ideomotor psychotechnique was made by Bodhidharma, the abbot of the Shaolin Monastery, who called it 'Chan'. It was precisely in China, Japan and other easternmost countries, where Christian ideologues had not yet managed to gain a foothold, that the ancient Russian art of trance movement was partially preserved in the form of various martial, mystical, health-promoting and religious systems.

Among other peoples, ideomotor psychotechnique—that is, the technique of entering a trance through automatic movements—has been preserved in the form of various simple, rhythmic and repetitive movements, accompanied by special rhythmic music or singing.

An example of the practical application of ideomotor psychotechnique was the ancient practice of 'vine-walking', in which, to search for water or ore, a split vine was taken in the hands; the practitioner would then induce a state where the hands, with the vine held outwards, would float, and then, feeling a general sense of weightlessness and the special euphoria of trance and anticipated good fortune, they would begin to search for water or ore hidden in the ground, expecting that above the spot where these were concealed, the vine would tremble downwards ideomotorically.

In the Middle Ages, ancient ideomotor psychotechnics of divination and prophecy through ideomotor (automatic) writing and ideomotor (automatic) speech spread throughout the world. Subsequently, Christian ideomotor psychotechnics for entering a trance through the 'floating of the hands' emerged at the Mount Athos monastery. Ideomotor psychotechnics subsequently appeared in the systems of mystics (Blavatsky, Gurdjieff, Ouspensky and others), scientists (Bekhterev, Platonov, Kandyba and others), as well as among spiritualists (involuntary tapping, pressure, twitching, etc.), psychics (pendulums, frames, etc.) and psychiatrists (Aliyev, Erickson, and others).

Adherents of spiritualism believed that there is life after death and that, during a séance, one could 'hear the voices' of deceased people, see their 'spirit', and so on. To establish contact with the 'spirits' of the deceased, they resorted to special tools, such as a Ouija board marked with the alphabet and the words 'yes' or 'no'

(as in dowsing). The medium would ask a question, then place their hand on the pointer or an upside-down glass, and the pointer, driven by the medium's ideomotor (automatic, unconscious) movements,
'on its own' moved from letter to letter, forming words
of the 'answer' (the mediums believed that their hand was being guided by the 'spirit' of the deceased).

In a variant of ideomotor (automatic, unconscious) writing, the medium would hold a pen or pencil in relaxed fingers above a sheet of paper and then, upon entering a trance, begin to write or draw something, believing that it was the 'spirit' of the deceased guiding their hand. There are known cases where a medium wrote several texts simultaneously, using both hands and in different languages! Sometimes (for example, in France) a 'writing tablet' was used for ideomotor writing – a small board on rollers with a hole for a pencil.

Some mediums who mastered the psychotechnical method of ideomotor speech claimed that the spirit of God or of a particular person had entered them and was speaking through them, often in a voice and manner of speaking that had changed slightly or significantly. At times, however, the ideomotor speech of a medium or prophet (such as Vanga and others) is difficult to make out and resembles delusional ramblings, requiring special 'deciphering'.

The phenomena of ideomotor art are of particular interest: ideomotor painting, where the medium believed that a specific artist was guiding their hand; and ideomotor music or composition, where the medium believed that the 'spirit' of a famous musician or composer had taken possession of them and was playing, composing or writing music. The same applies to ideomotor sculpture and other forms of art.

At present, ideomotor psychotechniques are applied in psychotherapy, psychoanalysis, self-regulation and in SK science: SK creativity, SK sport, SK autotraining, SK medicine, SK pedagogy and so on.

The literature describes cases where highly sensitive individuals have unerringly detected underground water and ore veins using a divining rod (or ore-seeking rod). As early as the late 17th century, Lebrun believed that the cause of the dowsing rod's movement lay in human will, and that its direction was determined by one's desires. Later, M. Chevreul (in 1853) also pointed out that the expectation of a certain oscillation on the part of the rod was the main cause of this oscillation. Subsequently, Kircher determined that the rod

does not tilt towards either water or metal unless it is held in a person's hands. According to M. Chevreul, A. Lehmann and N. A. Kashkarov, experienced dowsers can identify the location of a spring or ore vein based on the characteristics of the soil and vegetation, and the resulting thought manifests itself in the movement of the rod.

In the last century, a peculiar 'psychic epidemic'—table-turning—began to spread rapidly in America. The essence of this phenomenon was as follows: participants in a séance would sit around a table, placing their hands on it, and wait intently for 'messages from the other world'. Thought impulses, invisible to the eye, caused the table to move and creak in various ways, which were interpreted as answers
'spirits'. 'Table-turning' became a craze that captivated hundreds, thousands and hundreds of thousands of people. However, it was precisely at this time that level-headed scientists began to investigate the nature of all these 'mysterious' phenomena, in which a connection between thought and movement was observed. It was then that the term 'ideomotor act' (V. Carpenter) was introduced, which was used in empirical psychology to denote motor reactions that automatically arise following the mental representation of movement.

The first studies and theoretical foundations of ideomotor reactions were established by eminent scientists: M. Faraday, M. Chevreul, J. Brad, D. Mendeleev, V. Carpenter and others.

In a simple experiment involving holding a string in one's hand, at the end of which a weight was suspended, M. Chevreul discovered that, whilst
'thinking' about the pendulum moving clockwise, the weight begins to move in precisely that direction, describing a circle. The subject makes barely perceptible movements with their hand, without realising it themselves. M. Faraday, in his experiments using physical recording, proved that the hands of participants in spiritualist séances impart a series of unconscious ideomotor jolts to the table. This was also confirmed by J. Brad, who noted that the table only starts to move when the participants in the séance expect it to: if their attention is diverted, no movement occurs. D.I. Mendeleev precisely recorded every pressure exerted on a manometric table by the hands, even the faintest, thereby proving the existence of the ideomotor act. The American doctor G. Bird published a short pamphlet entitled 'On the Psychological Basis of Mind Reading'. Subsequently, W. Carpenter in

England and W. Preyer in Germany, independently of one another and without knowing of G. Bird's pamphlet, offered identical explanations for this phenomenon.

Whilst investigating the relationship between facial expression and the activity of facial muscles, P. F. Lesgaft also described ideomotor reactions. In the 1990s, a commission of the Russian Society for Experimental Psychology concluded that so-called 'mind reading' is nothing other than
'muscle reading', i.e. the interpretation of minute muscular movements. Later, A. Lehmann, using a kymograph, recorded the curves of an ideomotor act, whilst I.M. Sechenov, observing himself, established a link between internal and external speech and the presence of ideomotor speech movements.

In the scientific works of I.M. Sechenov (1863), L. Levenfeld (1903), I.R. Tarkhanov (1904), V.M. Bekhterev (1925) and I.P. Pavlov (1951), there are a number of examples of how vivid imagery and autosuggestion influence the vasomotor system, various somatic and many autonomic processes, and induce hallucinations and hysterical convulsions, often with fatal consequences. For instance, imagining the cold would cause 'goosebumps' to appear even in a warm environment; recalling something repulsive would lead to nausea and grimacing; and thinking of something terrible would result in body tremors, stigmata and seizures. There is a recorded case of a young woman who, whilst in a state of religious ecstasy, developed bleeding sores on her hands and feet in precisely the same places as the wounds of the crucified Christ.

M.F. Andreeva recalled that when Gorky was describing the scene of a woman's murder in his novella *The Town of Okurov*, he visualised her pain, sensations and wound so vividly that he fainted, and a stigmata formed at the site of the supposed wound, which remained for several days.

The gradual turning of the eyeball when thinking of an object outside the field of vision; the body's corresponding sound-kinetic response in a listener to the words of a speaker or singer; the involuntary, barely perceptible movement of the fingers in pianists who are playing a melody in their minds; sweating and a rapid heartbeat when experiencing observed or imagined stressful situations; an artist's or athlete's obsessive thought of failure before a performance and its manifestation in erroneous actions; micro-movements of a person's body and face,

who is trying to conceal their desires or actions – all these phenomena are caused by ideomotor acts (reactions), involuntary movements that arise automatically following the mental representation of them.

Research into ideomotor acts has given rise to a wide variety of theories. Thus, according to James's voluntarist theory, the thought of a movement brings it about directly, mechanically. This theory upholds the thesis that mental processes are immaterial, constituting a dynamic whole in which there is a cycle of thoughts and movements that form the ideomotor act. The ideomotor act is thus entirely detached from the material foundations of the psyche and appears as an external expression of an immaterial soul, set in opposition to the material world. In contrast to this position, I.R. Tarkhanov interpreted the ideomotor act in the spirit of natural-scientific materialism. He sought the neurodynamic basis of the process, which he saw in the 'intensification' or 'amplification' of motor traces remaining in the human central nervous system in a latent, tense state and manifesting themselves in the form of actual muscular movements. Attempts to interpret ideomotor reactions from idealistic and mechanistic perspectives were subjected to well-deserved criticism by K. Kornilov, S. Rubenstein and other Russian psychologists.

In 1914, I.K. Spirtoff, using Lehmann's apparatus—the principle of which is based on increasing the amplitude of movement by means of a special system of levers—recorded the slightest movements of the hand arising during motor imagery. The researcher's objectives were to verify the existence of the ideomotor act and to identify the conditions that facilitate its greater manifestation.

In particular, a series of experiments involved a man who had had his arm amputated above the elbow joint. The researcher asked him to 'perform movements' with the non-existent part of his arm and studied the bioelectrical potentials of the muscles in the stump and in the healthy arm. The potentials were of equal magnitude. It was found that simply concentrating one's attention on the mental image of a movement is not sufficient for an ideomotor response to occur. There must be an interest, either evoked by a

the imagined action, or its particular emotional colouring.

In 1924, R. Allers and F. Sheminsky also demonstrated that during the psychomotor visualisation of clenching a fist, the same action currents arise in the muscles as during the actual contraction of the hand muscles that clench it into a fist.

In the 1930s, E. Jacobson, through experiments using electrocardiographic recording of excitation impulses, described the galvanographic changes in muscles that occur during imagined actions. The galvanometric pattern of muscle potentials proved to be almost entirely identical during imagined and actual actions (in the former case, only a lower voltage is detected). E. Jacobson studied this issue in particular detail in connection with the problem of exercising the sense of muscle. The necessity of motor imagery for the occurrence of an ideomotor act was demonstrated. It was noted that impulses are sent to the muscles via the pyramidal nerve pathways by those cortical neurons whose activity is associated with the experienced motor imagery.

Whilst investigating neuromuscular responses to imagined work in subjects well-trained in muscle relaxation, E. Jacobson observed that the mental image elicits a real, albeit weak, contraction of the working muscles. Muscle tension is felt, but no movement is observed. Micro-movements of the hand correspond to the nature of the imagined action: when imagining a single throw of a ball, a single muscle contraction is recorded on the mechanogram; when imagining rhythmic movements, rhythmic muscle contractions are recorded. Whilst one hand is ‘working’, the muscles of the other remain passive.

Ideomotor acts perfectly illustrate I.M. Sechenov’s idea that thought is a reflex, more or less inhibited in its final, motor component—a reflex with an attenuated end—whereby the arc of such a reflex passes through the neurons of the ‘organ of the psyche’—the cerebral cortex. I.M. Sechenov demonstrated that stimulation of afferent cells invariably elicits corresponding movements.

Numerous studies by Russian and foreign physiologists and clinicians show that, during the period of immediate preparation for an upcoming activity, the functional state of many bodily systems involved in the actual execution of the motor act changes under the influence of motor imagery alone. Thus, when an action is imagined, blood circulation increases (I.R. Tarkhanov, 1904, E. Weber, 1810). If a person under hypnosis is led to believe that a light task is strenuous, then fatigue and changes in the cardiovascular, respiratory and other systems develop in accordance with the imagined, rather than the actual, task (D. N. Shatensteyn, 1936). 'Imaginary drinking' affects not only the functioning of the central and reflex mechanisms regulating the sensation of 'thirst', but also the overall distribution of water in the body (K.M. Bykov, A.D. Slonim, 1958). It was found that two minutes of imagined work altered the subjects' motor chronaxie (i.e. increased the excitability and lability of the peripheral nervous system) (V.V. Efimov, A.D. Zhuchkova, 1937). A comparison of the frequency and amplitude ratios in electroencephalograms and electromyograms recorded simultaneously during muscular work reveals changes in brain potentials associated solely with the mental representation of work and the state of readiness for it (P.I. Shpilberg, 1941).

In 1944, L.L. Vasiliev and E.Yu. Belitsky once again experimentally confirmed the existence of the ideomotor act and identified different patterns of ideomotor reactions. Recording of trunk sway on a pneumatic platform showed that the patterns of ideomotor reactions generally correspond to types of suggestibility. Four years later, A.V. Penskaya, whilst studying recordings of tremor in blind and sighted people, concluded that all healthy subjects, both sighted and blind, are capable of ideomotor reactions to a greater or lesser extent. This was confirmed by further studies of bioelectrical phenomena in the motor cortex and in the muscles during the ideomotor act (Yu. S. Yusevich, 1949; M. S. Bychkov, 1953; A.N. Sokolov, 1957; A.I. Roitbach, T.M. Dedabrishvili, I.K. Gotseridze, 1960; A.T. Tsuni, Yu.Z. Zakharianets, E.N. Surkov, 1961).

Studies have shown that the currents of ideomotor muscle excitation are similar to the action currents during actual movements, both in terms of quantitative characteristics and the shape of the curve. Thus, on electroencephalograms (EEGs) of the motor cortex obtained during an ideomotor act, a multitude of very slow, high-amplitude waves appear, giving the EEG the appearance of a curve typical of both ideomotor and actual muscle currents. This indicates that excitation during an imagined action is, to a certain extent, analogous to excitation during a real action. The similarity between muscular and cerebral rhythms suggests their probable constant interaction during the ideomotor process, which, as it were, integrates both the brain and the muscles into a single functioning system.

A theoretical explanation of the physiological mechanisms underlying ideomotor reactions was provided by I.P. Pavlov. He wrote: 'It has long been observed and scientifically proven that as soon as you think of a particular movement (i.e. have kinesthetic representations of it), you perform it involuntarily, without even realising it.'

Kinesthetic cells in the cerebral hemispheres, stimulated by movement from the periphery, can be stimulated centrally and send impulses via the corresponding cell to the peripheral organ. When a specific point on the surface of the motor area of the cerebral cortex is stimulated by a weak electric current, strictly defined skeletal movements occur. Consequently,
'a kinesthetic cell, when stimulated by certain passive movements, produces the same movement when stimulated centrally rather than from the periphery.'

I.P. Pavlov noted that kinesthetic cells can form connections with any other cells (auditory, gustatory, etc.) and that the process between them can 'move back and forth'. Owing to this interconnection between the kinesthetic cells of the motor analyser and the cells of many other analysers, the visual perception of objects and the perception of speech trigger the reactivation of traces of an entire system of temporal connections within the motor analyser, corresponding to the system of previously performed movements. As a result, through the mechanism of central excitation of the kinesthetic cells of the cortex, a mental representation of these movements arises.

The resulting excitation of the kinesthetic cells spreads to the cells of the motor, speech-motor and other analysers. From there, impulses are transmitted to the ‘working organs’ – the muscles and internal organs – and elicit the corresponding external responses.

Thus, motor representations form the basis of the ideomotor act. In this process, not only unconsciously arising but also consciously evoked representations are translated into minimal movements. This repeated conscious excitation of specific kinesthetic cells—both during the performance of an actual task and during its mental reproduction—reinforces and strengthens inter-centrial connections, which facilitates the more rapid formation of a motor stereotype.

In the light of I.P. Pavlov’s theory of the first and second signal systems, the mechanisms and characteristics of trace phenomena in the motor analyser become apparent, manifesting, in particular, in the form of an ideomotor act.

Drawing on A.A. Ukhtomsky’s theory of the dominant, the excitation of kinesthetic cells in the cortex associated with motor representations can be characterised as a dominant focus, which is intensified and reinforced by additional muscle impulses resulting from the minimal muscle contractions that occur during the ideomotor act.

The conditioned-reflex nature of ideomotor reactions is confirmed by the results of a number of electroencephalographic (EEG) studies. In this context, the ideomotor act can be represented as a closed loop of isorhythmic reactions. Central excitation of the motor area of the cerebral cortex triggers micro-contractions of the muscles; the resulting excitation of the proprioceptors then becomes a source of peripheral impulses to the cerebral cortex. Thus, four main elements of the mechanism of the ideomotor act can be identified:

1) the preliminary perception of movement and the associated excitation of kinesthetic cells;

2) the formation of a motor image and the associated excitation, similar to that which occurred

during perception;

3) excitation in motor cells arising from their temporal connections with kinesthetic cells;

4) the transmission of excitation to the muscle and the resulting motor response.

From a neurophysiological perspective, the training effect of mental imagery results from the consolidation of specific connections within the functional dynamic system through the repeated mental execution of specific actions, in exactly the same way as occurs during their repeated practical repetition.

Consequently, the training effect of mental imagery is linked to the reinforcement of the motor dominant in the neural centres and to the additional influence of feedback arising during the actual execution of the movement.

All this demonstrates the significant influence that motor imagery has on changes in the functional state of many of the body's systems and on a person's physical manifestations. Moreover, the results obtained following mental imagery are similar to those obtained following the actual perception of objects, things, phenomena, sensations, movements and actions. All this points to the vast potential for the application of ideomotor processes in various fields of human activity.

The subject of ideomotor activity occupies a significant place in educational research relating to various types of human activity: SK therapy, the arts, aviation, sport, and others.

G. Ruben-Rabson (1941) concluded that ideomotor training improves the memorisation of piano technique. The remarkable Russian pianist I. Hoffman wrote that, just as the movement of a finger is determined first and foremost in the mind, so too must every passage be fully prepared mentally before it is tried out on the piano.

There are accounts of musicians who, deprived of their instrument for one reason or another, mastered a programme ideomotorically, relying on their inner ear, and subsequently performed it with great technical skill. The renowned pianist I.I. Mikhnovsky believes that pieces which are not particularly difficult can be prepared for performance without an instrument, provided that they do not contain any

technical techniques that have not yet been mastered; moreover, a piece prepared in this way is memorised in greater detail and more firmly, as it eliminates ‘the mechanical mastery of any details solely by means of the fingers’.

The system of actor training devised by K.S. Stanislavsky is largely based on ideomotor principles. The imagined image and the associated emotional experience act as a stimulus for the actor’s on-stage transformation. Research into the psychological foundations of an actor’s on-stage transformation shows that a fixed mental attitude towards the imagined situation is developed, and an attitude towards it is formed that would have existed had the situation been real. S. Gippius (1967) provides examples of acting training which enhances the plasticity of the nervous system and enables the conscious reproduction of the mechanisms of vital activity – the mechanisms of perception and reaction, and the mechanisms of switching.

In describing the nature of his psychological experiments, V. Messing (1961) noted that he was guided by ideomotor signals involuntarily transmitted to him by a subject who was intensely thinking about the forthcoming mysterious movements. Human ideomotor acts were widely used in their performances by hypnotists and entertainers: Brody, Feltsman, Kuni, Dadashev, Ignatenko and others.

As noted above, a vivid mental image of a particular movement, coupled with concentration on it, triggers the involuntary execution of that movement. In the workplace, ideomotor acts are often the cause of many errors and even accidents. K.K. Platonov (1962) cites interesting examples where a learner driver’s thought: ‘I’m about to crash into a post’ – is sometimes manifested in erroneous movements rather than corrective ones. There are grounds for believing that some cases of mid-air collisions between aeroplanes, as well as the involuntary premature pulling of the ripcord during parachute jumps, are caused by a similar manifestation of ideomotor activity. At the same time, numerous experiments point to the significant influence of kinesthetic representations and sensations on the correct regulation of working movements.

A number of studies demonstrate the potential for using ideomotor responses to create bioelectric control systems. For example, bioelectric currents from skeletal muscles, as well as from the heart muscle and the muscles controlling respiratory movements, have been utilised for control purposes.

In 1956, a prosthetic metal hand was constructed, controlled by the bioelectric currents of the muscles that flex and extend the fingers.

The Polytechnic Museum houses a model of an electric train that anyone can control ‘mentally’: a clever mechanism connects the human hand to the train via a thin wire through which bioelectric currents are transmitted.

Norbert Wiener, the founder of cybernetics, wrote about the possibility of a completely new, direct form of human-machine interaction, and about the creation of systems in which unprecedented mechanical structures would obey the brain, just as the muscles of a living hand do.

In aviation, great importance is attached to the development of ‘flying instinct’. Researchers highlight the importance of preliminary ‘mental flight simulation’ among pilots and note that imaginary flights contribute to the automation of sequences of actions and the development of flying skills among cadets.

The method of deliberate visualisation is used both in the initial development and refinement of flying skills, and in the restoration of these skills following a break from flying.

There are reports in the literature on training using imagined movements in medical practice.

For example, N.A. Popova (1955), in describing a technique for restoring motor functions in patients with central paralysis of vascular origin, reports that this method is highly effective. Furthermore, the method for applying ideomotor movements developed by Z.M. Ataev (1973) aids in the recovery of functions in an injured limb even in cases where the reproduction of movements is difficult or impossible, for example, during plaster cast immobilisation. Ideomotor activity plays an important role in sporting activities. As far back as 1899, the American scientist D. Anderson attempted to determine whether it was possible to prepare muscles for

perform gymnastic exercises if the movements are merely imagined but not actually carried out. Numerous experiments yielded positive results.

In subsequent years, this finding was experimentally tested and confirmed by a large number of studies on psychomotor skills in various countries. It has been conclusively demonstrated that ideomotor training helps to increase attention to the activity and awareness of it, resulting in improved quality of exercise performance, greater precision of movement, accelerated learning, and the ability to begin mastering an unfamiliar action without actually performing it.

The first experimental studies on ideomotor practice in the training process of athletes were carried out in the USSR. From 1940 onwards, A. Ts. Puni conducted research over many years on athletes from various disciplines. He noted that the performance of sporting exercises, both during training and in competition, is significantly more effective when the practical execution of the exercise is preceded by 'mental' execution. According to his research, training involving the mental visualisation of movements resulted in the following improvements among the athletes involved: movement speed increased by 34 per cent, accuracy by between 6.4 and 16.8 per cent, and hand muscle strength by 34 per cent. In 1967, A.C. Puni put forward the theory of the multifunctional nature of movement imagery.

In 1943, R. Wendell, R. Davis and G. Clagston identified the effect of ideomotor training in archery and javelin throwing at a target, and determined that this form of training produces the same effect as practical training. Later, A.C. Puni (1948) observed an increase in the clarity of motor-muscular sensations and mental imagery among fencers and skiers.

L. Halverson (1949), having conducted research on basketball players practising one-handed shots at the basket, concluded that performing this action approximately 500 times through ideomotor rehearsal improved their performance by 13.4 per cent. In 1947, V. Twinning conducted similar research on athletes throwing rings at a target. In the control group, which did not undergo any specialised training, no improvement in performance was observed. In the same study,

the group of subjects who used only ideomotor training improved their results by 36 per cent, whilst the group who trained practically improved by 37 per cent. In 1952, V. Sgidle observed improvements in baseball performance across the groups of 7.6 per cent, 9 per cent and 15.3 per cent, respectively.

According to E. Trassel (1953), combining one week of ideomotor training with two weeks of physical training whilst juggling a tennis ball yielded the same result as three weeks of physical training alone. Similar results were obtained among tennis players by R. S. Abelskaya (1955) – after they had mentally rehearsed their actions whilst solving tactical problems – and by R. Wilson (1960) – whilst practising forehand and backhand strokes.

Many studies indicate that effective improvement can only be achieved through a combination of ideomotor and physical training. Furthermore, the influence of ideomotor training on the development of skills and abilities is most effective when the trainee is already familiar with the exercises and movements or possesses some prior motor experience. At the same time, individual studies (D. Jones, 1963; A.A. Belkin, 1965) show that through ideomotor training alone, it is possible to master a new exercise (a completely unfamiliar action) in depth without having performed it beforehand. However, only a few highly skilled athletes possess this ability. A number of studies have established that ideomotor training makes it possible to identify errors or refine a motor skill that has already been learnt, but may be ineffective if the mental execution of the action is not sufficiently precise and thorough.

When properly organised in any sport, the ideomotor method can significantly improve ‘muscular endurance’ (I. Kelsey, 1961), athletic performance (G. Tivald, 1973) and help to maintain the technique of complex exercises following a break in training (V. Ya. Dymerksy, 1965; A. A. Belkin, 1969).

Ideomotor training is effective in regulating athletes’ emotional states prior to competitions (A.V. Alekseev, 1968).

Thus, the brain is the organ where the programme for future movement is formed, whilst the body’s other systems—primarily the musculoskeletal system—carry out the planned

programme. The quality of the final outcome of our activity depends on how successfully the programming and executing systems function, and on how well they are interconnected.

In order for mental images of future movement to be realised as effectively as possible, we must use them correctly. Moreover, we must use them quite consciously and actively, rather than simply relying on the processes with which nature has endowed our bodies. Imagination, as a mental process, is governed by certain laws.

The first principle is that the more precise the mental image of a movement, the more precise and ‘clean’ the executed movement will be.

The second principle is that only a mental image in which the mental picture of the movement is necessarily linked to a person’s muscular-articular sensation is termed ideomotor.

Mental representations can be ‘visual’. In this case, a person sees themselves as if from the outside, as though on a television screen. It is important to realise that such ‘visual’ mental images have very little training effect. After all, in this case, the impulses generated in the brain are hardly transmitted to the muscles that are supposed to carry out the intended movement. Consequently, the effort is, as it were, wasted, and there is insufficient activity in the relevant muscles. This can be demonstrated by an experiment with a suspended weight. Mentally picture yourself as if in a ‘mirror’, ‘look’ at yourself from the side and try, whilst looking at that ‘mirrored’ weight hanging to the side, to imagine it swinging – you will find it much more difficult.

The lack of coordination between the programming organ – the brain – and the executing apparatus – the muscles and joints – is particularly evident when observing the naked body of a person sitting or lying still with their eyes closed. In cases where the person is thinking ideomotorically, ‘passing’ mental images of movement ‘through themselves’, micro-contractions and micro-relaxations are quite clearly visible in their muscles. If, however, the mental images are purely visual in nature, no micro-movements occur in the muscles, although the person feels as though they are
is ‘passing’ these mental images through their body.

Consequently, by observing a person's muscles during ideomotor training, it is easy to determine to what extent their mental images of a particular technical element are achieving their objective.

The third point concerns research by a number of authors, notably A.D. Puni, Y.Z. Zakharianets, V.I. Silina, E.N. Surkova and others, who have demonstrated that the effect of mental imagery increases significantly when it is expressed in precise verbal terms. It is not enough simply to visualise a particular movement; one must simultaneously verbalise its essence, either silently or in a whisper. In some cases, the words should be spoken in parallel with the visualisation of the movement, whilst in others – immediately before it. Practice will guide you on how to proceed in each specific instance. It is easy to see for oneself that words significantly enhance the effect of mental visualisation by conducting an experiment with an object suspended from a finger. If, rather than simply visualising the weight beginning to swing—say, back and forth—you start to say the words 'back and forth' aloud, the amplitude of the oscillations will immediately increase.

The fourth principle is that, when beginning to learn a new technical element, one should visualise its execution in slow motion, just as we see in a film shot using the rapid-motion technique. Visualising the technical element in slow motion will allow for a more precise understanding of all the subtleties of the movement being learnt and will help to identify and correct any potential errors in good time.

The fifth principle is that, when mastering a new technical element, it is best to visualise it in the posture that most closely resembles the actual position of the body at the moment of performing that element.

When a person practising ideomotor training assumes a posture close to the actual body position, far more impulses are sent from the muscles and joints to the brain, which correspond to the actual movement pattern. And it becomes easier for the brain, which programmes the ideal ideomotor representation of the movement, to 'communicate' with the executing apparatus – the musculoskeletal system. In other words, the person gains the ability to practise the required technical element more consciously.

This is why training equipment that allows one to assume a wide variety of postures is so useful, particularly where movements often take place in the air after lifting off from points of support. Having experienced a state of sort of weightlessness, a person begins to better sense the subtle elements of movement technique and visualise them more clearly.

The sixth stage – during ideomotor rehearsal of a movement, it is sometimes carried out so strongly and clearly that the person begins to move involuntarily. And this is a good thing, as it indicates the establishment of a strong connection between the two systems – the planning and the executing systems. That is why this process is beneficial: it allows the body, as it were, to initiate the execution of the movement that arises in the mind of its own accord. This phenomenon was most frequently observed during sessions with figure skaters. Standing on their skates with their eyes closed, they would, to their own surprise, begin to move smoothly and slowly in response to their mental ideomotor representations. As they put it, they felt ‘guided’.

This is why, in cases where ideomotor representations do not materialise immediately but with some difficulty, it is advisable to consciously and carefully link these representations to the corresponding bodily movements, thereby connecting the mental image of the movement with the muscles that execute it.

A few words on so-called imitations. By imitating – performing, as it were, a hint of the actual movement or part of it – a person helps to form a clearer mental picture of the technical element they need, moving, so to speak, from the periphery, from the muscles, towards the centre, towards the brain. So, imitating a wide variety of movements—which is often seen during a warm-up—is a useful aid in preparing to perform a particular difficult exercise.

However, when imitating, one must consciously link the movements being performed with their mental image. If the imitations are carried out mechanically or one’s mind wanders, the imitative actions will be of no benefit.

The seventh point is that it is wrong to think about the end result immediately before performing an exercise. This is one of the more common mistakes.

When concern for the result dominates one's thoughts, it crowds out what is most important – the understanding of how to achieve that result. So it turns out that, for example, a marksman thinks about the need to hit the 'bullseye'; this thought begins to interfere with a clear understanding of the technical elements without which hitting the 'bullseye' is simply impossible. That is why he misses. 'He tried too hard; he really wanted it,' people say in such cases, forgetting that to achieve the desired result, one must not think about the result itself, but rely on mental images of the actions that lead to it.

Thus, the essence of
'ideomotor principle of movement construction'.

Let us summarise the main points. So, to achieve high precision of movement, one must:

Firstly, create an extremely precise mental image of the movement in question, initially at least a visual one;

Secondly, to translate this image, whilst maintaining its high precision, into the framework of ideomotor control; that is, to execute the movement in such a way that, following its mental image, the corresponding muscle groups begin (albeit barely perceptibly) to function;

Thirdly, select a verbal programme to describe at least the most important – the key – elements of the movement being practised.

One may proceed to the fourth stage – the physical execution of the movement – only once the preceding conditions have been met, once the ideomotor image of the movement has become precise and stable, and once the muscles required to perform the intended movement have been thoroughly 'warmed up'.

As practice shows, adhering to this principle of movement construction avoids many complications and yields the desired result much more quickly than the usual 'trial and error' method.

And now a few words about SK-ideomotor training. It turns out that if an ideomotor mental image of a movement is 'run through' the SK, the movement achieves greater precision than after

ideomotor training carried out in a normal state of consciousness.

There are two types of SC-ideomotor training:

1) with the help of an instructor (hetero-SC-ideomotor training) and

2) independent (auto-SC ideomotor training).

So, to summarise: mental preparation for complex automatic motor skills involves daily, systematic, purposeful training of brain functions, primarily using words and the mental images associated with them, whilst simultaneously practising the ability to manage one's attention and emotions.

And now a few words about ideomotor tests.

By an ideomotor test, we mean an assessment of the ability to perform actions without visual control, relying solely on motor imagery and motor sensation. Ideomotor tests make it possible to assess and measure the spatial, temporal and force characteristics of both simple and complex movements and actions performed by athletes following various forms of specific preparation. Test results can be recorded using instruments, specialised devices and apparatus.

Kinemometers (hand-held and foot-operated) enable the measurement of the precision of motor-muscular differentiation in the elbow, wrist, knee and hip joints when performing simple movements following appropriate ideomotor training. Thus, the subject sits sideways to the apparatus in a comfortable position and places their forearm on the kinematometer's support. They make several attempts to abduct their arm through a specified range of motion, visually monitoring the movement whilst endeavouring to memorise the motor-muscular sensations arising in the elbow joint.

They then ideomotorically reproduce these sensations several times (depending on the task) and carry out 3–5 control attempts with their eyes closed. The magnitude of the error is recorded on the kinematometer's graduated scale; only the initial position of the subject or the apparatus is altered.

Stopwatches determine the accuracy of ideomotor reproduction of speed, duration, simultaneity,

the sequence of movements of various body parts, individual actions and the exercise as a whole. A comparative analysis of the temporal parameters of ideomotor and actual task performance allows an assessment of the effectiveness of ideomotor training, of each individual's capacity for ideomotor control and, indirectly, of their level of fitness and technical readiness for competition.

Dynamometers (hand-held or bench-mounted with a clock-face indicator of the Abalakov design) indicate the accuracy of reproducing the static and dynamic forces of the muscle groups under investigation. The measure of muscular force accuracy indicates the extent to which different types of mental preparation influence the effectiveness of the action.

Target screens, height gauges and centimetre tape measures record data (to within 1 mm), which can be used to assess the training effect of various ideomotor tasks. For example, on a special stand, taking into account the subject's height, a sheet of paper is attached with a circle of 15 mm diameter drawn in the centre.

Standing 0.5 m from the target, and following trial attempts and preliminary ideomotor training, the subject performs five stabs at the target without visual guidance. Similarly, a test is conducted involving taking a step forwards from a standing position along a line drawn on the floor (50 cm from the starting position) and lifting the leg to a height of 50 cm whilst standing sideways to the height gauge. Errors are recorded based on data obtained by calculating the deviations of the 'prick' points from the centre of the circle and of the toe from the reference mark on the floor or on the height gauge (in mm).

The training effect of visualising the movement is determined by an improvement in the result compared with performing the control tasks with and without visual guidance.

The device for performing drawing tasks produces graphical output from which it is possible to establish the relationship between the quality of figure drawing and the training effect of ideomotor tasks, and to indirectly assess the state of mental readiness for the forthcoming action.

The design of the apparatus is based on a device for conducting a myokinetic test (Mira, López, 1939). The apparatus consists of a stand and a work surface mounted on it, which can be adjusted in two planes (horizontally and vertically) and

can be adjusted vertically depending on the subject's height. A record sheet is attached to the work surface. The graphic tasks may include: a horizontal line 5 cm long, an equilateral triangle with a side length of 5 cm, a right angle, and so on. Deviations from the template are measured in millimetres and degrees.

The influence of individual abilities and skills in technical drawing and art is ruled out by the conditions of the experiment: in this case, the pencil serves not as a drawing instrument but as a marker recording the movement of the whole hand. The hand must not touch the work surface.

Tremometers (of the Mede or Verhalo design) and special boards with cut-out shapes, connected to the mains via an electricity meter and an electric stopwatch (A.C. Puni, V. I. Sekun), enable objective data to be obtained on the training intensity of ideomotor tasks based on the number of errors recorded by the counter when the tremometer's probe makes contact, and on the time taken by the subject to 'trace' the shapes cut out on the front panel of the tremometer and the boards.

The rowing machine and graduated screens make it possible to obtain data on the effectiveness of ideomotor training under natural conditions. The rowing machine consists of a frame (150 cm long, 24 cm wide, weighing 5.2 kg) with a standard kayak seat and a 115 cm-long oar with fine needles or chalk attached to its ends. It can be set up on a flat sandy or wooden (plywood) surface. The marks left by the oar after strokes on both sides of the apparatus are measured in centimetres. The distance from the start of the stroke to its end and from the body of the apparatus to the point where the oar is 'gripped' is recorded.

A marked graduated screen and a special device allow deviations from the precise execution of exercises and jumps to be recorded following various forms of ideomotor training and adjustment (in degrees and centimetres). For example, in our studies, the correct execution of complex jumps with 360° and 720° turns was defined as landing within the marked area. The landing point was determined by the midline connecting the heels. A perpendicular line drawn from this point indicated the deviation from the ideal in degrees.

And now a few more words on teaching ideomotor phenomena.

The process of teaching the ideomotor method must be based on well-known didactic principles, whilst also taking into account a number of specific principles:

1. The principle of motivated interest. This involves instilling a serious attitude towards the method. If it is not possible to generate a deep and sustained interest in the method, it will not produce the expected effect.

2. The principle of universal effectiveness. The activation of motor imagery is an effective means of self-regulation of negative emotions. Ideomotor training fosters a range of essential intellectual and volitional qualities (the ability to concentrate, the intensity and stability of attention, a propensity for self-observation, self-analysis and self-assessment), and develops cognitive interest and a creative approach.

3. The principle of dominant effectiveness. The training effect is most pronounced in the mastery of the spatial characteristics of movement, followed by temporal characteristics and, to a certain extent, strength-related characteristics. Moreover, the more complex a motor action is in terms of its kinematic structure and coordination, the more essential it becomes to apply ideomotor training.

4. The principle of delayed effect. The first sessions at the initial stage of training are not always accompanied by a training effect. This is due to the lack of a sufficiently comprehensive programme of movement imagery. Those who begin using the ideomotor method in the early stages may initially lag behind in their rate of learning. However, soon afterwards, as their motor-muscular mental representations become clearer and more stable, they significantly outpace pupils training using conventional methods without the use of ideomotor techniques.

5. The principle of content-based effectiveness. The content of ideomotor reproduction may comprise the entire movement or action from start to finish, including all details and motor components (spatial, temporal and force-related); the entire movement (but in a generalised and condensed form); or the most difficult, key

moments of the action; or just its beginning and end. At the same time, against the backdrop of the individual diversity of variants, a consistent pattern emerges: the greatest actual training effect of visualising movement is achieved through ideomotor reproduction in motor-muscular images of the key moments of the action and its essential outcome.

6. The principle of modelling. The effectiveness of ideomotor reproduction is enhanced in conditions of real-life action modelling. By manipulating a model (wireframe, plastic, graphic or scale model), a person strives to translate the technical model (image of movements) into actual movement, fixing within it the key effective moments or postures. In doing so, the coach can always obtain the necessary information regarding what image is forming or has already formed in the learner's mind, and whether the desired outcome corresponds to reality. The result of such actions is the creation and consolidation of an optimal model in the minds of both the learner and the coach.

7. The principle of basing. Repeated and prolonged ideomotor reproduction of a movement or action fatigues the nerve centres. Consequently, motor imagery loses its vividness and clarity, becoming disorganised and vague, which significantly reduces the effectiveness of ideomotor training. It is therefore advisable to mentally repeat an ideomotor task 4–5 times, whilst a task involving complex and prolonged exercises should be repeated only once.

AUTOMATIC WRITING

For a long time, phenomena such as table-turning, automatic writing and so on have aroused great interest. Undoubtedly, in most cases we are dealing with skilful imitations. That said, it would be rash to deny the existence of genuine abilities. However, the line between the genuine and the false is so fine that few people have managed to resist the temptation to exaggerate or even fabricate.

Automatic writing can be characterised as the ability to express thoughts on paper without concentrating on the process. Whilst writing, the individual may be reading, engaged in some other activity, or in a state of relaxation. The writer may be engaged in conversation whilst their hand automatically writes lines which, when read, turn out to be a fairly good piece of prose or poetry. The writer themselves, however, has absolutely no idea what they have written until they read the text. The content and style are most often completely at odds with the writer's personality: one gets the impression that it was all written by someone else. Many old-school psychologists held the view that in such cases there is a disruption of the integrity of the mental world. This is characterised by the manifestation of emotionally charged thoughts and desires and their specific organisation, which gives rise to yet another additional and autonomous personality possessing its own volition. As for ordinary people, they tended to attribute everything that happened to spirits. Among the simplest forms of automatic writing (autography) are pendulums and tablets. Divination using a pendulum in the form of a suspended ring became widespread in both the West and the East and has been known since the dawn of the Roman Empire. One variation involves suspending the ring inside a glass, a practice which at one time enjoyed widespread popularity among spiritualists. A single tap on the side of the glass meant 'no', two taps meant 'yes'. By asking questions,

the practitioners would receive one answer or another. Proponents of this or similar methods claim that, with the aid of a pendulum, they are able to obtain information in any field: medicine, forensics, and so on. The direction of movement, the amplitude, and the type of oscillation allegedly enable them to answer the questions at hand. Most adherents of the method believe (and quite rightly so) that their pendulum registers and reflects muscle contractions in the upper limbs. However, they also believe that these contractions are the result of a reaction to ‘waves’, ‘vibrations’ and ‘fields’ emanating from the object. This view reflects the ideas encompassed by the term ‘dowsing’. The latter is, in essence, a modern version of ancient occult beliefs.

There is also a view held by another school of dowsers. It holds that all predictions are possible through the action of psychic forces and abilities, that is, telepathy, clairvoyance and divination.

The pendulum effect, table turning and the use of divining rods are the result of unconscious muscle contractions. The instruments simply record what are commonly referred to as ideomotor movements. It is well known that it is practically impossible to keep a ring suspended on a thread and held by the hand completely still. When the hand is held still and the movements of the ring are visualised, it does indeed soon begin to swing. If the subject mentally visualised a circular motion, the ring will move in a circle; if they thought of a side-to-side motion, the result will be exactly that. In other words, the ring’s movement accurately reflects the individual’s thoughts. It is for this very reason that the term
‘ideomotor’.

When working with a table, two or three participants place their hands on it, causing it to move in a way that fully reflects unconscious ideomotor movements. A naive belief in a spirit or spirits causing the table to move stems from a simple lack of knowledge about everyday phenomena.

One of the most interesting accounts concerning research into mediums comes from Jung. In it, he describes the astonishing results obtained whilst ‘reading’ the thoughts of people whose hands were resting on the table. However, in his view, these results were due

primarily by the ability to detect muscle contractions, which, combined with skilfully phrased questions and well-considered remarks, made it fairly easy to make sense of what was happening. Violet reports a very striking case in which the desire to resort to the aid of a table and spirits ultimately turned into an obsession. The woman herself sought help at a psychiatric clinic, where attempts were made to prevent her from having any contact with a table of any kind. However, she continued to communicate with spirits. This time, the role of intermediary was played by a pencil, which would point to specific letters in a book or simply tap on the headboard of the bed. The doctors ruled out this possibility. The woman then began to tap out signals with her fingers. Gradually, this process became internalised, that is, purely mental. Now, communication with the spirits and with God Himself took place through the mental articulation of certain letters.

The use of planchettes is a method of autography, situated somewhere between ideomotor movements and automatic writing. The essence of this method is as follows. The letters of the alphabet are arranged in a circle, within which the words ‘yes’ and ‘no’ are enclosed. Any object capable of moving easily (a glass, a saucer, or a special board on wheels) is used as a pointer. The participants in the séance place their fingers on it and begin to ask questions. As it moves, the object points to ‘yes’ or ‘no’ or to a sequence of letters that make up a message. For beginners, this often resembles gibberish; however, as they gain experience, it becomes increasingly coherent. Once the stage of automatic movement is reached, the hand movements begin to be controlled by the conscious mind—or rather, by elements of it—as a form of dissociation occurs. All the participants’ attention is focused on a single goal: reading the messages as they appear. The high speed achieved through these automatic movements sometimes even requires the presence of a stenographer to record the messages.

Unlike the writing tablet, the board used in spiritualist séances is much more convenient to use. It consists of a small board on wheels, fitted with a pencil. The device glides easily across the paper,

which the pencil leaves its mark. With a certain amount of practice, a high speed of writing can be achieved, which in this case is truly automatic.

Existing works written or recorded by autography are regarded by old-school psychologists as the most striking evidence of a dissociated personality, which
'lies buried in the depths of the subconscious'. However, certain hysterical reactions should also be mentioned here, such as the flight reaction, when a person forgets who they are and, for some time (months or even years), lives as a completely new individual. In such cases, it is primarily those personality traits that have always sought an outlet but were brutally suppressed that come to the fore.

There is nothing extraordinary about automatic writing. This was demonstrated by Dr Muhl. She discovered that, under the right conditions, most mentally healthy individuals can be taught to write automatically. As for patients, Muhl used autography to encourage them to look within themselves and revive repressed memories, ideas and associations. One patient was able to transcribe music automatically. Others reproduced something mysterious and enigmatic, or drawings with a magnificent colour palette, the symbolic content of which was then deciphered during the process of automatic writing. All of this provided excellent material for psychoanalysis.

The connection between autography and the hypnotic state of consciousness was repeatedly emphasised by Jung, Brown and other researchers. They all conclude that automatic writing can be easily induced by hypnotic or posthypnotic suggestion. McDougall writes that in many cases it is also possible to obtain retrospective information about the thought process that took place during the writing by inducing a hypnotic state in the subject. Prines describes a method which works as follows: the practitioner first hypnotises the individual and then suggests that they should write something (a poem or some other kind of composition) upon waking. The subject is then woken up, given a pencil, presented with a sheet of paper, and at the same time

forced to read a text aloud or perform mathematical calculations. Whilst they are fully concentrated on the task, the hand resting on the paper begins to write. At the same time, the subject is completely unaware of what is emerging from the pen. The hysterical personality type of the subjects examined by Prines is evident in the fact that, in a number of cases, the hand was completely insensitive; however, as regards healthy people, post-hypnotic suggestion rarely allowed genuine autography to be achieved. Although the most striking cases of automatic writing occur in hysterical patients, they may nevertheless be observed in normal individuals as well. However, it should be borne in mind that in spontaneous autography, hysteria is most often the triggering factor.

The most interesting and significant study in the field of autography is Prines's work, 'An Experimental Study of the Mechanism of Hallucinations'. It describes experiments with a woman who, whilst engaged in automatic writing, was simultaneously able to verbally describe the accompanying visual hallucinations. She possessed the ability to initiate the process of autography at will, which was often accompanied by hallucinations and pseudo-hallucinations reflecting the content of what was being written. The woman was completely unaware of what she was reproducing on paper, even when the writing proceeded very slowly. During the experiments, to rule out the possibility of her reading the material being written, the woman's head was covered with an opaque cloth. Descriptions of the hallucinations were recorded on tape, which subsequently allowed their content to be compared with the text. The woman referred to above sought help from Prines because she was suffering from a split personality.

The 'author' of the autonographic works went by the name of 'Julia' and was a highly spiritual Spanish peasant girl who lived in the 12th century. This Julia was the second personality who manifested herself at certain moments. As for the visions, they seemed to have little connection with one another. However, the records provided the missing link that helped to correlate them and made it possible to interpret them as variations on the same theme. Prines

notes that the hallucinations were richer in detail than the description of the episode, as is clearly evident from the example given below.

Automatic writing.

1. '…I am heading towards a small village church or mission where Mass was being celebrated…'

The visions accompanying it.

The road. At the end of it is a small church. A sort of white-plastered mission church. Julia has her back to me. She has her back to me. She is walking barefoot along the road towards the church. Everything is very clear, as if on a screen. I can see the ears of wheat swaying in the fields (I have the feeling that Julia is being lazy and doesn't want to go to church).

2. '…in the village which, during my time there, was called Medesa.'

"Some sort of square. I can see Salvatore, Julia's uncle. An awning is stretched over the vegetables laid out for sale. There are lots of women around who look like foreigners. A crowd."

In another series of experiments, Prines altered the conditions so that the woman was first induced to have visions using a magic crystal, and was then instructed to make notes. In this way, the content of the hallucinations determined the style of the notes. The question of whether the visions are genuine sensory hallucinations remains open, as it cannot be ruled out that they are nothing more than the product of unrelated pseudo-hallucinations.

Most people wishing to develop the ability to write automatically begin by simply holding a pencil in their hand, with a sheet of paper placed beneath it, and deliberately concentrating on a conversation or on what is happening around them. This act of waiting serves as a form of mild autosuggestion. After a certain period of time, the pencil begins to move and draws individual strokes, either zigzag or straight lines. The next step involves writing individual letters or a series of letters that have no meaning whatsoever. Further practice will enable you to combine these into words or sentences. There are a number of published works that were created through automatic writing and which undoubtedly possess artistic merit. They reflect

certain repressed aspirations and ideas, often in the form of complex and profound symbols.

The records of the Society for Psychical Research contain many interesting facts concerning autography. One of these relates to Dr S.G. Soel, who discovered that he possessed the ability to write automatically. However, this process was effective only when his hand was guided by a specific person, who helped him keep the line straight and returned the pencil to its starting position once the line was complete. Such a 'creative partnership' is an utterly unusual phenomenon. Soel himself writes about it as follows:

'By concentrating on simple calculations, I learnt to reach a state where my mind was entirely absorbed in the process. It was during this period that I was able to reproduce something in writing. As soon as I paid attention to what my hand was doing, everything stopped just as suddenly as it had begun. Such a state of complete immersion can only be sustained for a few minutes. However, one further effort, and a quick burst of concentration at the very moment when I feel myself slipping out of this state, allows me to resume it and continue writing without any noticeable interruption."

When discussing autography, one cannot fail to mention stereography (mirror writing). There are people capable of resorting to this form of writing at will. Cases of spontaneous stereography are not such a rare phenomenon among left-handers who have been retrained.

Strephography is usually observed in cases of damage to the cerebral hemispheres, mental retardation, hypnotic influence, states of partial consciousness, and certain forms of hysteria. It is interesting to note that in most cases, the writers themselves are unable to read what they have written. Hallucinations of a halographic nature, arising whilst working with a magic crystal, are sometimes mirror-like. Furthermore, the words making up a sentence may appear in reverse order (inverted mirror writing). A similar phenomenon is the so-called reverse order of spoken expression (reverse speech). The sequence of sentences may be entirely logical; however, the words making up the sentence are pronounced not from the beginning but from the end. Sometimes, the words remain in their correct

, whilst the order of the letters is reversed. Thus, ‘cat’ becomes ‘tok’. There is also a phenomenon known as strephosybia, which is observed extremely rarely. It consists of the fact that, in order to read a text, it must be turned upside down. It should be borne in mind that all the phenomena listed above stand on their own and do not fall within the group of phenomena defined by the term ‘autonography’.

The pseudo-personality that manifests as a result of autonography is often the complete opposite of the subject’s own personality. Thus, a gentle, shy person may reproduce a first-person text that is replete with heroic deeds or tragic descriptions of sudden deaths. Many people who practise autonography tend to claim that they have no connection whatsoever with what is written, but are merely conduits for ideas belonging to the spirits of the dead. In the past, ‘verbal automatism’ or ‘involuntary speech’ was regarded as demonic possession, which was grounds for a death sentence.

Some researchers attribute autography to a dualistic consciousness. However, this term is completely devoid of any meaning. It is well known that many people develop the ability to write letters, business documents and so on whilst engaged in conversation. If one then asks them a few questions, it becomes clear that they remember both the content of what they have written and the conversation. Experiments indicate a lack of concentration on any single type of activity. As soon as such concentration occurs, the subject loses the ability to engage in anything else at the same time.

In a number of cases, autography, or mediumistic trance, is accompanied by a more or less profound amnesia. Here one may discern an analogy with an unconscious conversation with oneself. People engaged in such a conversation are completely unaware of what is happening. The amnesia can be so profound that they will deny the facts and swear that they did not utter a single word. The common denominator of all forms of automatism is that the activity in question (mental or physical) is not linked to the usual, normal exercise of volition, which in this case can be neither an initiating nor a sustaining factor. Until scientists fully understand the mechanism of focused attention,

a comprehensive explanation of phenomena such as autography, mediumistic trance and hysterical dissociation will not be possible.

Sometimes automatic writing is preceded by a conversation, i.e. the subject asks questions of the ‘spirit’ verbally, transcribing the answers in writing. It is worth citing the case of Soal here, whose interest in physical research led him to take an interest in spiritualism. He was therefore not particularly surprised when he suddenly discovered a propensity for autography in himself. All the works were allegedly dictated by the spirit of a Victorian-era poetess named Margaret Beley.

Soal, naturally, could not agree with this assertion, as he believed that the pseudo-personality appearing in the written works was a figment of his own mind. At the same time, he was prepared to believe that knowledge could be acquired through telepathy and clairvoyance. His hand did everything possible to convince his sceptical host that he was mistaken in denying the spirit’s authorship. The record of the questions asked by Soal and the spirit’s answers demonstrates the extent to which one’s own dissociative processes can mislead the writer’s personality. Reading it leads one to believe that it truly reflects a ‘conversation’ between two completely different people. The arguments, excuses and ploys of the pseudo-personality, insisting on its authorship and existence as the spirit of the deceased poetess, whilst naïve, are characterised by a distinctly marked individuality. Soal himself could say very little about Margaret Veley’s life and work. Thus, the correspondence between the information obtained through autography and actual facts does indeed constitute a fairly convincing argument in favour of information being received through telepathy or clairvoyance. However, it is probably more accurate to consider that this phenomenon is based on cryptomnesia, which is regarded as the sudden resurgence of forgotten memories, experiences and factors. At the same time, the subject is unable to recall the sources of the information or the circumstances under which it was obtained. Dissociation further exacerbates this state. This is why many people, being unable to recall the sources

of the information, attribute everything to the workings of their ‘psychic powers’, whilst avoiding the term ‘magic’.

It is not uncommon for a record to be written in handwriting different from that of the subject. This is interpreted by supporters of spiritualism as further evidence in favour of the spirit’s authorship. However, one should not forget that suggestion can just as easily cause an individual to alter their handwriting. The phenomenon closely related to autography is the verbal automatism mentioned above, which is quite common amongst patients with psychoses. However, unlike in hysterics, the process here is more mechanical than intellectual. Verbal automatism in hysterical patients can be viewed as a bridge between autography and the utterances of mediums in a trance. Such widely known phenomena as ‘demonic possession’, various forms of ecstasy, etc., are often associated with a certain degree of verbal automatism followed by amnesia. There are known cases of hysterical verbal automatism in which the individual is aware of what they are saying, whilst at the same time being unable to stop their speech apparatus from functioning or to control their train of thought. There are many people in the world who would never speak automatically. For instance, a sleeper who utters certain words in their sleep would be surprised to learn that the psychological processes underpinning this phenomenon and possession by the devil differ very little from one another.

On Creativity

According to V.I. Vernadsky, a prerequisite for an individual’s creative activity is that they possess certain capabilities. These are:

1. To carry out a detailed analysis.
2. To see the general in the particular.
3. Not to limit oneself to describing phenomena, but to explore their essence and connection with other phenomena in greater depth.
4. Not to shy away from the question ‘why’.

5. To gather as much information as possible on the subject of research from material sources (primarily scientific), referring to the original texts.

6. Trace the history of ideas.

7. Study the general principles of scientific knowledge (reflect on how you think).

8. Link the science being studied to other fields of knowledge and to social life.

9. Do not merely solve problems, but also identify new, unsolved ones. When tackling a creative task, people are usually trapped by familiar options. Creative ideas are guided by psychological inertia, i.e. towards where one would least expect new, original solutions.

Methods of creativity.

Let us list some of them.

1. Autotraining as a method of stimulating creative abilities: a) in the final stage, whilst performing relaxation exercises relaxation, activate mental formulas to solve the problems at hand using one's own intuition whilst asleep, and bring them to conscious awareness upon waking ('The morning is wiser than the evening');

(b) the strengthening, through self-suggestion, of belief in one's own abilities and a change in self-esteem (the realisation of the suggestion of a highly talented individual is possible on the basis of a strong motivation to achieve success and the possession of an appropriate level of specific skills).

2. The focal object method. Characteristics of several randomly selected objects are transferred to the object under consideration (the focal object), which is the centre of attention; this results in unusual combinations that help to overcome psychological inertia. For example, if 'tiger' is chosen as a random object and 'pencil' as the focal object, 'pencil', this results in combinations such as 'striped pencil', 'fanged pencil' and so on.

3. The method of morphological analysis:

A) identify the main characteristics of the object (ideas) – the axis ('trunks');

B) for each of the axes ('trunks'), list all possible variants – elements ('branches').

Example – problems with starting a car engine in winter.

The following could be taken as axes: energy sources for heating, methods of delivering energy from the source to the engine, etc. Elements for the ‘energy sources’ axis could include: a battery, a petrol burner, steam, hot water, a chemical heat generator. By listing the elements across all axes and combining different elements, you can generate a large number of possible options. Moreover, the combinations may turn out to be quite unexpected, leading to an original solution to the problem.

4. The ‘brainstorming’ method – for collective creativity:

A) identify a group of the most resourceful people within the team – the idea generators;

B) Set this group the task of generating ideas relevant to the problem at hand. Within 20–30 minutes, the members of this group can put forward dozens of very different ideas, including some that are improbable and even absurd; criticism of any ideas is prohibited, whilst building on and developing them is permitted (all ideas must be recorded);

C) The ideas generated are passed on to another group within the same team (a group of ‘critics’ who are well-versed in the subject area) – their task is to identify the rational core of each idea and find the appropriate solution to the tasks at hand.

‘Brainstorming’ proves most effective when combined with a method aimed at making the unfamiliar familiar, and the familiar unfamiliar. Turning the unfamiliar into the familiar means studying the problem and becoming accustomed to it. After that, the reverse procedure must be carried out – making the familiar seem unfamiliar. This is achieved through the following four steps:

1) personal identification – identifying oneself with a particular element of the problem situation, for example, a moving part of a mechanism or a machine component;

2) direct analogy or the search for similar processes in other fields of knowledge; for example, an electronics engineer, when solving a technical problem, looks for analogies in hydraulics or thermodynamics;

3) symbolic analogy, or the use of poetic imagery and metaphors to formulate the problem;

4) fantastical analogy, in which the problem is mentally solved ‘as in a fairy tale’, i.e. the fundamental laws of nature are ignored; for example, one can arbitrarily switch Earth’s gravity on and off, change the speed of light, and so on.

It is well known that a person’s cognitive functions are reduced when lying down, whereas walking whilst engaging in mental activity, on the contrary, stimulates a person’s creative potential. It is recommended to spend a few minutes before going to sleep reflecting on the most difficult questions that could not be resolved during the day.

Notes: 1. There are three types of mind:

A) Conceptual mind: enables people who possess it to solve logical, mathematical and linguistic problems effectively. B) Aesthetic mind: people possessing it seek to understand the form of phenomena, not always considering their causes, and almost never their practical application.

C) Social intellect: people possessing this focus on interpersonal relationships and are particularly perceptive when making decisions that affect people’s lives, establishing a hierarchy of goals and value orientations.

2. To achieve high productivity, several conditions must be met. These are:

1) A gradual start to the working day.

2) Consistency and a defined system in one’s work; working according to a plan.

3) Proper distribution of the workload – daily, weekly, monthly and even annually. Rushing and idleness are unacceptable. According to K.S. Stanislavski, a creative person must learn to
‘to make the difficult habitual, the habitual easy, and the easy beautiful’.

4) In intellectual work, the predominant use of logical memorisation, which is more than 20 times more efficient than rote learning.

5) Recognising the importance of one’s work.

6) Organisation of the workspace: clean air, air temperature 16–18°C, relative humidity 35–70 per cent, adequate lighting (a 50–60 W desk lamp), tidiness in the workspace, and the absence of noise and other distractions.

7) Taking short breaks from time to time.

8) Finishing work under any circumstances.

3. The best way to relax.

The most beneficial form of rest for your health is pursuing your personal intellectual interests: fishing, hunting, playing music, socialising with friends, etc.

Here is a reminder of the rules which, if followed, will ensure you have a good rest.

1) Take an active break; don't spend whole days lying in bed or on the sofa.

2) Don't do the same things on your day off as you do on weekdays; try a different activity.

3) Be sure to spend at least 3–4 hours in the fresh air. City dwellers are best advised to head out of town.

4) A day off is the best time for sport.

5) It's good to tend to your garden and vegetable patch.

THE FATE OF YOUNG GENIUSES

From time to time they ‘pop up’ – whether on the television screen or in the pages of a newspaper – evoking a whole range of emotions in us, from admiration to envy. They are rarely encountered in real life. Firstly, because there are so few of them, and secondly, because they follow their own path. But one day they blend in with the rest of us – that is, they fade away – and the only evidence of the former wonder is the certificates and diplomas, carefully stored away in a cupboard.

Most child prodigies, alas, fail to make their mark in adult life. People still expect miracles from them out of habit, unwilling to believe that the flowers have already faded and that only a magician could bring them back to life.

Valery Hiltunen, the owner of a database of Russian child prodigies, recounted that in his entire career as a journalist he had met only one former child prodigy who, even in old age, had not lost his spark and continued to amaze the world. It was Isaac Asimov, a boy from near Smolensk who went on to become a great American science-fiction writer. Isaac – known as Isaak at the time – experienced first-hand all the problems
of ‘wunderkindisation’. From childhood, he knew he would be a genius, and for this he was beaten mercilessly, with people telling him: ‘You’re no genius; be like the rest of us!’ Right up until his death, Isaac Asimov retained an inexplicable fear of aeroplanes and steamships. He would come down from his skyscraper once a week. This fear prevented him from visiting his homeland.

They stopped organising reunions for former child prodigies: it is simply too sad a sight to see people whose expectations and potential have diverged so sharply.

When yesterday’s competition winner – the pride of the school, the star of concerts, accustomed to rapt attention, a sort of black sheep – becomes just like everyone else, it’s a real drama. Insecurities and neuroses set in. For a fragile and sensitive soul, the transformation from child prodigy to ordinary person can lead to disaster, even as far as suicide. A strong, self-assured individual will move on, calmly managing without trying to reach for the stars. Like athletes or dancers, having served their

natural phase, they seek fulfilment elsewhere. Admittedly, unlike child prodigies, they have managed to realise their full potential.

Anyone who deals with the issues surrounding gifted children knows that during puberty – from 11 to 14 years of age – a
a 'black hole' may occur, when everything is lost. Neuropsychologists have their own view: at this age, a restructuring of brain activity takes place, which is particularly dangerous for child prodigies.

Mozart was already, at the age of three, playing on the harpsichord pieces that his eight-year-old sister was learning; by the age of six he was composing sonatas, and a couple of years later he was outshining established conductors. Beethoven gained fame as a brilliant composer at the age of ten. Georg Wiese had a perfect grasp of musical notation by the age of four. These child prodigies went on to become geniuses. Similar examples can be found in any field of science or the arts.

But there aren't that many of them. Then there are people who develop later in life, who did not display any particular talents in childhood but blossomed in adulthood. Rodin began creating at the age of forty; Michelangelo was no child prodigy either.

Every person has their own ceiling. Most reach it gradually, by the age of thirty or forty. There is a lower limit to this ceiling – the case of the mentally retarded, the intellectual zero – whilst there appears to be no upper limit. Some people reach the peak of their creative potential by the age of five to ten and then plateau, whilst others reach their peak much later. This unusual hypothesis
of the 'disappearance' of child prodigies was put forward Anatoly Severny, president of the Independent Association of Child Psychiatrists and Psychologists. There are very few exceptionally gifted children—only one in every 5,000 to 6,000. In the US, up to four thousand dollars is spent on identifying young talent. Here, they are hardly sought after at all. What's more, when forming a class, teachers try to not , preferring the 'easy' for themselves. There are some exceptional children who feel lost in new situations and don't know how to make a good impression. Anatoly Severny told the story of a highly gifted boy whom a psychologist at his nursery had predicted would a brilliant prospects. But at the interview for admission to the special school, the child came across as utterly pitiful. His mother was advised to consider a special needs school, and

it was only thanks to the parents' titanic efforts, combined with the support of a child psychologist, that the boy was spared such a sad 'career'.

'We've succeeded in our selection process,' says my interlocutor. 'We isolate children who are developmentally delayed from society. If they can't cope with the curriculum or behave inappropriately, off they go to a boarding school or a special school, into an environment with their peers. The whole world has long been convinced that this is harmful. Moreover, such a flawed system is dangerous; it deprives society of a certain moral potential. Not to mention the fact that a significant proportion of children end up in these institutions by chance, by mistake, or due to a combination of circumstances. Their true abilities and potential will never be realised. And who knows – perhaps there is a Pushkin or a Dal among them?.. Moreover, it has long been no secret that genius often goes hand in hand with mental illness. Society must treat sick children with particular care, not least because they may grow up to be geniuses. Even the most severe mental illness does not rule out the possibility of genius. After all, genius is always a deviation from the norm.

One Frenchman spent twenty years of his life trying to find this gene, thereby unravelling the mystery of nature. He studied everything and found nothing but… uric acid. The meticulous Frenchman came to the conclusion that there is a certain function of a certain gland, some strange mechanism that keeps a person in a state of excitement, providing a constant impulse towards creativity. Evidence that this gland is at work may be found in the manifestations of conditions such as gout and consumption.

Many will find this hypothesis absurd, but there is a grain of truth in it. A genius cannot help but create – it is a condition of his existence. For him, there is no rest in the traditional sense. It is impossible to deprive him of the need to create something new, even if everything else necessary were taken away. A mathematician will continue his calculations in his head, an artist will sketch with a burnt-out match, a musician will compose a melody in his mind…

Incidentally, the finest of the child prodigies would, given the chance, ask a magician for a recipe on how to manage without rest.

It has long been known that people blessed with a special gift are not like everyone else. They are simply different. Eccentric, strange, not of this world. Although the 'genius gene' has not been identified, it is clear that talent is not an accessory but a trait of the personality. If a person has sufficient inner

inner energy for them to blossom and break through; if it is lacking, they may live their whole lives without ever discovering their true calling.

It would seem that parents know better than the child themselves what they are most inclined towards. Alas, we often overestimate what is not there, and vice versa. Allan Fromm, one of America's leading experts in paediatrics, child psychology and psychiatry, warns that excessive zeal is more likely to destroy than to develop genuine talent. Parents should help their children discover their aptitudes through their natural interests.

'The vast majority of parents know nothing about their children,' says child psychiatrist Anatoly Severny. 'When I speak to a child in private, I ask them: "Shall we tell Mum everything
?' If they object, the secret remains between us. But if they agree to confide in me, Mum often bursts into tears upon learning what a hell her child is going through inside… As a rule, parents do not give their children the opportunity to fulfil their potential to the full. Usually, a standard set of options is offered, which used to invariably include figure skating, and now includes English. After all, we have a mindset centred on uniformity, which even extends to the realm of happiness. And this is instead of thinking about how to give children the greatest possible variety. Let them try everything: music, languages, engineering and drawing. An active, free exploration without coercion will yield results.

– But there are, after all, quite a few highly specialised schools, lyceums and gymnasiums today. Many parents try by every means possible to get their children into them.

– Highly specialised schools with early talent identification are unsound for a whole range of reasons. They create an unjustified sense of exclusivity and elitism in children. Elitism is necessary, but it should manifest itself in more natural circumstances. Interacting only with peers who are similar to oneself is also dangerous, as it can lead to a narrow outlook and a distorted sense of self. Parents, meanwhile, in pursuing their own unfulfilled ambitions, force their child to do things for which they are not naturally predisposed.

– What advice would you give to parents of gifted children?

– There are just two: to create the greatest possible opportunities for them to realise their abilities without coercion, and under no circumstances to limit themselves to this area alone. Let's say a child declared at an early age

as a pianist, but by the age of fourteen has reached their limit. If, apart from the piano, they have seen nothing else in this world, they will suffer a breakdown… Some secondary schools and lyceums give children the opportunity to explore various abilities. For example, at Moscow School No. 654, this kind of free exploration is practised. Pupils in Years 8 and 9 spend a whole term studying one subject in depth, then another, so that by Year 10 they have made a clear decision.

Recently, a photograph of a teenager with pensive eyes and a serious expression went viral in the newspapers. Twelve-year-old Kirill Lantukhov has become a student at the Faculty of Computational Mathematics and Cybernetics at Moscow State University. When asked if he would like to study abroad, he replied without hesitation: 'Yes, of course, there's nothing keeping me here…'. Before condemning this young pragmatist, it is worth asking: is there actually a social need for specialists of this kind in our country today? Look at who is in demand these days: managers, advertising agents, accountants. It turns out that the Russian school system, and subsequently the university, are preparing Kirill and his peers for the West. Or for the whole of humanity. Or perhaps for evil. History knows enough examples of evil geniuses.

– 'Giftedness is a heavy burden,' says Anatoly Khavkin, a paediatrician and Doctor of Medical Sciences. 'It is a borderline condition, a deviation from the so-called norm. Such a child experiences constant mental overload and exhausts their energy reserves. They devote a great deal of time to their studies, spending many hours away from other children. As a result, their social and psychological development is stunted. In essence, they are robbed of their childhood and turned into a racehorse. And all this in the name of some hypothetical idea… A gift should not destroy a child's personality, let alone their physical health. They will finish school at the age of 12 or 13 and go on to university – but what then? We cannot predict when this phase of accelerated development will come to an end. A balanced upbringing is essential.

This is the aim set by the Pirogov School, named after the famous Russian surgeon, who is also known for his work in the field of education. The school was founded five years ago with the blessing of Archpriest Alexander Men. Children of different faiths and with different abilities study there.

Those who were denied a proper education by mainstream schools, and sent to ‘reserves’ for the disabled, can study at the Pirogov School on an equal footing with their able-bodied peers. The diagnoses are grim: ranging from cerebral palsy to hydrocephalus, which neurologists classify as a severe condition. Incidentally, the great Beethoven would have been given precisely this diagnosis. Fortunately, the composer did not attend a special school…

– ‘A special preparatory class for children with disabilities has been set up at the Pirogov School,’ says Anatoly Khavkin. ‘The sight of a young person with a disability provokes fear, pity and sometimes even ridicule. Yet they may well be extraordinarily gifted individuals.’

Is it possible to nurture a genius in everyone? Back in the 1950s, there were a few people in our country who produced child prodigies to order. A man named Kravets undertook to provide any child with four types of education – musical, artistic, sporting and general – by the age of 13. And he did this for a substantial fee for the children of high-ranking Party officials.

‘Kandi’ – the Russian superhuman!

I have decided to recount my research into the creation of a superhuman using ‘SK’ – the ‘Kandyba State’ – which I carried out in 1984 in Kyiv. I made a discovery that still amazes all experts: for the first time in the world, an artificial human was created, consisting of several human bodies but with a single psyche and a single psychophysiology. At first, I created an artificial human with two bodies, then with three, and then with five…

Since time immemorial, Russian Religion has employed a psychotechnical method for training child scouts. A priest would take an orphaned child under his wing and, through systematic trance-based training, achieve a fusion of the child’s psyche with his own. Afterwards, the teenager would take up a job chosen by the priest and, telepathically, like a video camera, record everything and transmit it to the priest’s mind; in this way, the priest could see and hear everything. Moreover, the priest, through the body of this teenage

scout. The fact is that the brain of the teenage scout and the priest's brain merged to become a single brain, a single psyche, a single person, but with two bodies – the priest's body and the teenage scout's body. In the Middle Ages, following Christianisation and the collapse of the Russian Empire, this terrifying priestly psychotechnique was lost. And so I, having devoted several years to this problem, managed to create the SK psychotechnique and make the most outstanding discovery of the 20th century…

In SK science, it is known that as the depth of SK-2 increases, the subject ceases to perceive the SK specialist's suggestions as coming from another person and begins to perceive them as their own volitional decisions. In SK-2, a close connection and deep psychophysical interdependence are established between the hypnotised subject and the SK specialist. The hypnotic subject's increasing SK sensitivity develops into a particularly mysterious state of super-hypnability, in which the hypnotic subject's left, analytical hemisphere of the brain is switched off and replaced by the SK specialist's left, controlling hemisphere, whilst the right hemisphere of the hypnotised person's brain, with its capacity for feelings and vivid imagery, merges with the right hemisphere of the SC specialist's brain. The result is two people with a single functioning shared brain, a single psychophysiology, a single set of thoughts, a single will, a single set of experiences and a single set of shared sensations: sight, hearing, taste, smell, pain, etc. The main characteristic of this new human being, possessing two bodies (that of the hypnotist and that of the SK specialist), is the presence of two functioning right hemispheres of the brain and a single left hemisphere. This means that such a dual artificial human has doubled life-support systems, as well as doubled intuitive abilities and reaction speeds; furthermore, a single person (the SK specialist) is capable of constantly being in two places at once, with a dual flow of incoming information and a single controlling volitional centre.

I made the experiments more complex and began 'working' with two hypnotised subjects simultaneously, creating a single personality from three people. I managed to deactivate the left hemispheres of both hypnotised subjects and achieve the integration of the three right hemispheres – that of the SK specialist and the two hypnotised subjects – into a single unified whole. The SK specialist then emerged from

the ‘triple human’ and left the two hypnotised subjects alone, with a single shared brain and a single shared psychophysiology. In this experiment, for the first time in the world, I produced a single human being with two physical bodies, with two active shared right hemispheres of the brain and with the left hemispheres of the brain completely deactivated. In honour of its creator (V.M. Kandyba), the artificial human from the first series of experiments involving two subjects and from the second series involving three subjects was named –
‘Kandi’. The name ‘Kandi’ came to be given to all other artificial humans in all subsequent experiments. Thus, the ‘Kandi’ created in the second experiment, unlike the first ‘Kandi’, possessed the intellect of a four-year-old child and double intuition, even though the ages of the two hypnotists were 36 and 39. The experiments showed that the right hemisphere of any adult’s brain is an independent personality with the psyche of an intelligent animal and the vocabulary of a three- or four-year-old child.

Consequently, ‘Kandi’ turned out to be an intelligent creature consisting of two human bodies. ‘Kandi’ remained under the post-hypnotic control of the SK specialist and carried out completely autonomous independent animal-like lifestyle throughout the entire two weeks of this experiment. I further complicated the experiments and created a single being from five people, without any controlling connection (rapport) with the SK specialist. They weretrained five participants of the experiment hetero-SC and self-regulating SC. All five participants began, using a special SC technique, to simultaneously immerse one another in a deep, active SC-2 state. After a short while, all five people merged into a single, human super-intelligent superbeing. The five-bodied ‘Kandi’ possessed a single, profound soul and a single psychophysiology; although the five individuals had differed greatly from one another prior to the experiment, they were now became behave behaveas a single organism, with a single shared thoughts, desires and feelings, a single behaviour and a single will, arising from a single source, and the sourceof will was not localised in any of the five individuals, but was located somewhere unknown. It is interesting to note that the new collective behaviour and the character of each individual differed greatly from the character and personality traits of the person from whom that individual had originated. Each individual of the five-bodied ‘Kandi’ became a super-intelligent, super-strong, super-agile being, telepathically subordinate to a single Super-Soul and a single

Superwill with a single Superpsyche, which no longer had any specific spatiotemporal localisation.

Whatever was done to individual specimens, it had no effect on ‘Kandi’. ‘Kandi’ began to develop rapidly of its own accord and, by the third day of the experiment, had mastered clairvoyance, knowledge of the past and future, powerful telepathic hypnosis, and so on.

‘Kandi’ began to fight against me and, possessing immortality, started to subjugate everyone around him through telepathic hypnosis. Many people within a radius of several kilometres, as early as the fourth day of ‘Kandi’s’ five-body existence, began to feel an inexplicable control and power exerted over them by ‘Kandi’. Moreover, ‘Kandi’ twice attempted to create super-beings similar to himself but subordinate to him. It became clear that ‘Kandi’ was immortal and sought world domination and the destruction of all earthly civilisation. With immense difficulty, I managed to dismantle ‘Kandi’ and bring the experiment to an end. Thus, the Russian superhuman

‘Kandi’, created by the genius of Russian scientists, was defeated by that very same genius! It is hard to imagine what might have happened had I attempted to create a hundred-bodied ‘Kandi’, or, for example, a thousand-bodied one…

‘Kandi’s’ most dangerous trait was his ability to foretell the future; subsequently, a new ability emerged – the power to shape future events and phenomena, specifically those favourable to ‘Kandi’, and he knew no limits to this ability. The only thing that saved us all was that I destroyed ‘Kandi’ immediately upon discovering that he had learnt to shape the reality of the future. Thus, I have created a super-being which, in its smaller forms (2 or 3 bodies), can be utilised in modern civilisation.

Conclusion

Dear readers! Our firm runs monthly two-week courses to help anyone who wishes to develop various superpowers, using methods from Japan, the USA, Germany and Russia.

In addition to developing abilities, we teach techniques for SK self-healing and SK healing of others. The classes cover unique insights into history, religion, culture and more. We provide the necessary advice on any further questions.

We sell and post additional literature on SK, hypnosis, self-regulation, medicine, psychology and other subjects. All books are based on SK! The authors are V.M. Kandyba or D.V. Kandyba.

We also conduct training sessions in your local area, should you invite us.

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